

**LAND DISPOSAL RESTRICTION
TREATABILITY
VARIANCE PETITION**

**Heritage Environmental Services, LLC
7901 West Morris Street
Indianapolis, Indiana 46231-3301
IND093219012**

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May 7, 2003

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1.0 INTRODUCTION

The site-specific Land Disposal Restriction (LDR) treatability petition submitted herein is for the electrostatic precipitator ("EP") dust generated as a waste from the Guardian Industries Corp. ("Guardian") glass manufacturing plant in Jefferson Hills, Pennsylvania. The EP dust is characteristically hazardous for selenium and carries the US EPA hazard code of D010.

This petition demonstrates that the wastestream of concern cannot be treated to the specified LDR criterion for selenium because the chemical properties of the waste differ significantly from the wastestream originally used by EPA to establish the LDR selenium standard. Heritage Environmental Services, LLC ("Heritage") proposes to stabilize this waste at our RCRA permitted treatment facility in Indianapolis, Indiana (IND 093219012) in accordance the treatability variance criterion for selenium developed herein. The stabilized material will be disposed of in Heritage's RCRA permitted Subtitle C landfill (IND 980503890). Over the past twelve (12) months, Guardian has worked with several independent disposal companies in attempt to properly handle this waste. All have been unsuccessful to this point.

This treatability variance petition follows procedures found at 40 CFR 268.44 and in the US EPA Guidance Document, *Variance Assistance document: Land Disposal Restrictions Treatability Variances & Determinations of Equivalent Treatment*.

It is important to point out that the US EPA has previously granted treatability variances for similar selenium bearing wastestreams from similar glass manufacturing facilities. Appendix A contains four excerpts from the Federal Register that describe those variances as they progressed from proposed to final form and subsequently were granted LDR variance extensions in May 2002.

2.0 ADMINISTRATIVE INFORMATION

2.1. Submission of Completed Applications

This LDR variance petition is submitted in accordance with 40 CFR 260.20 and complies with 40 CFR 268.44.

One (1) copy of the completed petition is hereby transmitted by certified mail to:

The Administrator
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

An additional copy marked "Treatability Variance" has also been transmitted by certified mail to:

Chief, Waste Treatment Branch
Office of Solid Waste (5302-W)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

2.2. Petitioner's Name and Contact Information

The petitioner's EPA ID number is IND093219012 and the address is:

Heritage Environmental Services, LLC
7901 West Morris St.
Indianapolis, IN 46231

The petitioner's contact person is Doug Opell who can be reached at 317-486-2773 or doug.opell@heritage-enviro.com.

The generator's facility address is:

Guardian Industries Corp.
1000 Glasshouse Road
Jefferson Hills, PA 15025-2597

The Guardian facility contact person is Brian States, Environmental Engineer, who can be reached at 412-382-3353 or bstates@guardian.com.

3.0 CHARACTERIZATION OF WASTESTREAM

3.1. Description of Waste Generation Process

The significant raw materials in the Guardian glass manufacturing process include sand, sodium carbonate, and dolomite. These materials are melted in furnaces and run over a tin bath where color additives are then introduced. Among the color additives are selenium and other microingredients. Color additives are used to provide the "tinted" feature of (auto) glass. All gases from the furnaces are captured by a lime scrubber, followed by capture of the reacted lime dust via an electrostatic precipitator.

3.2. Waste Characteristics

The waste is a dry powder that is generally beige in color with a slight pinkish tint. The material is very light with a bulk density of about 0.4 g/cm³. As can be seen by the analytical data summarized in Table 1, the calcium content is relatively high (e.g., around 30%) as would be expected because of the lime injected to the furnace exhaust. The material is uniform and displays various levels of selenium generally ranging from about 1% to 7%. The most recent series of analyses are summarized in Table 1, shows the total selenium content averages around 5%. Appendix B provides Certificates of Analysis and Quality Assurance/Quality Control (QA/QC) Reports are found in Appendix C.

The rate of variation in the amount of waste is related to demand and could range from 20 to 50 tons/month. Because the material is captured via lime treatment and the EP, the wastestream is physically very consistent. The waste is generated at a rate of about 34 tons/month. This number will vary only due to EP equipment breakdowns, maintenance, etc. Metals concentration of the waste can vary due to recirculation of the lime within the EP, glass production rates, and product switchover to nonmetal containing production. Guardian produces Privaguard™ and SMG™ products at this facility, and production amounts of each type varies based on demand from the automotive market. Guardian - Floreffe is capable of producing up to 350 tons/day of either product, seven days a week, 365 days a year. Privaguard™ uses metals such as selenium and chromium to achieve color. SMG™ does not use these metals and therefore the lime injection is used only to control sulfur dioxide emissions and/or system carry-over of metals from previous Privaguard™ production.

3.3. Applicable Waste Codes and LDR Standards

Analytical results from TCLP analyses for five (5) different samples of the raw Guardian waste are summarized in Table 2 (see Appendix C for details). With the exception of chromium, underlying constituents are not expected to be present. The EP dust is a D010 characteristic waste because the TCLP selenium concentration exceeds the 1.0 mg/l criterion. The results in Table 2 also show that occasionally the dust is a D007 characteristic waste. Table 2 also summarizes the LDR criteria where it can be seen that the untreated Guardian waste exceeds the LDR criteria for selenium and chromium. Due to the raw materials and furnace temperatures, no organic compounds are expected to be present in the waste material.

TABLE 1
Summary of Analytical Results on Guardian Samples

	Original Guardian Test Sample	Guardian Sample 1167804	Guardian Sample 1156648	Guardian Sample 1160040	Guardian Sample 1167893	Guardian Sample 1168279
Sample Date:						
Lab Sample ID:	Bench-Scale Testing -Heritage Technology Group					
Ag	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Al	0.05%	<0.1	<0.1	<0.1	<0.1	<0.1
As	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
B		<0.1		<0.1		
Ba		<0.1		<0.1		
Be		<0.1		<0.1		
Ca	29.0%	31.7%	32.2%	32.9%	29.1%	22.0%
Cd	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Co	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Cr	0.04%	<0.1	<0.1	<0.1	<0.1	<0.1
Cu	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Fe	0.12%	0.11%	0.11%	0.11%	0.11%	<0.1
K		<0.1		<0.1		
Li		<0.1		<0.1		
Mg		0.45%		0.47%		
Mn		<0.1		<0.1		
Mo	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Na		2.9%		2.4%		
Ni	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Pb	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Sb	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Se	1.1%	4.7%	4.5%	4.6%	6.4%	0.56%
Si		<0.1		<0.1		
Sn	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Sr		<0.1		<0.1		
Ti	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Tl		<0.1		<0.1		
V	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	<0.01%	<0.1	<0.1	<0.1	<0.1	<0.1
Zr		<0.1		<0.1		

Results expressed as percentages.

Note: Samples digested by SW 846 - 3010B

(1) "E" – Estimated

3.4. Basis for LDR Standard

The chemical properties of the waste differ significantly from the waste used to establish the current LDR standard for selenium (5.7 mg/l, as measured by the TCLP). An excerpt from the May 28, 2002 Federal Register (36814; first column) states, in part:

In the "Third Third" Rule, the US EPA used performance data from the stabilization of a selenium D010 mineral processing waste, which was determined to be the most difficult to treat selenium waste, to set a national treatment standard for selenium. This waste contained up to 700 parts per million total selenium and 3.74 mg/l in the TCLP leachate. The resulting post-treatment selenium TCLP levels were between 1.80 and 0.154 mg/l, which led to our establishment of a national treatment standard of 5.7 mg/l...

As was noted earlier, the selenium content of the Guardian D010 wastestream generally ranges from about 10,000 to 70,000 mg/kg and thus is significantly different than the (700 mg/kg) wastestream that EPA indicated was originally used to establish the LDR.

A final set of tests was conducted to generate stabilization data. Five different samples of the Guardian waste using the recipe are presented in Appendix D. The TCLP testing was performed by Heritage's commercial laboratory, and the certificates of analysis and the quality assurance reports from Heritage's Commercial Laboratory NELAC Laboratory Operation (CLO) (including spike data) are provided in Appendix E. The results are summarized in Table 4 where it can be seen that all of the LDR criteria were achieved except selenium. The TCLP selenium results averaged 37.8 mg/l and ranged from 28 mg/l to 45 mg/l.

4.5. Proposed LDR Treatability Variance Criterion

The method for computing the proposed LDR treatability variance criterion was that presented in EPA's *Final – Best Demonstrated Available Technology (BDAT) Background Document for Quality Assurance/Quality Control Procedures and Methodology* (Ref. 1). The data employed were the TCLP test results on five (5) different samples that were stabilized using the recipe of 2.0 parts cement, 0.7 parts ferrous sulfate heptahydrate and 1.0 parts selenium waste (see Table 4).

The first computational step was to check the TCLP selenium data for "outliers" to assure that all data were representative. The measure of difference was determined by a statistical method known as the Z-score. The data points are first transformed by computing the logarithm. The Z-score is then calculated by dividing the difference between the data point and the average of the data set by the standard deviation. For normally distributed data, 99.5% (or two (2) standard deviations) of the measurements will have a Z-score between -2.0 and +2.0. As indicated below, there were no outliers.

			<u>Z-Score</u>	<u>Outlier(?)</u>
TCLP selenium Test 1	45 mg/l	$\ln = 3.8067$	+1.061	no
TCLP selenium Test 2	28 mg/l	$\ln = 3.3322$	- 1.644	no
TCLP selenium Test 3	38 mg/l	$\ln = 3.6376$	+0.097	no
TCLP selenium Test 4	40 mg/l	$\ln = 3.6889$	+0.389	no
TCLP selenium Test 5	<u>38 mg/l</u>	<u>$\ln = 3.6376$</u>	+0.097	no
Means	37.8 mg/l	3.6206		
Standard Deviation:		0.1754		

The next step was to compute the variability factor, VF, which is the estimated daily maximum variability factor:

$$VF = C_{99}/\text{Mean}$$

Where:

C_{99} = Estimate of the performance values for which 99 percent of the daily observations will be below. C_{99} is calculated from: $\text{Exp}(y + 2.33S_y)$ where y and S_y are the mean and standard deviation, respectively, of the log-transformed data.

$$\text{From above, } C_{99} = \text{Exp}(y + 2.33S_y) = \text{Exp}(3.6206 + 2.33(0.1754)) = 56.2 \text{ mg/l}$$

$$\text{The variability factor is thus: } VF = C_{99}/\text{mean} = 56.2/37.8 = 1.487$$

As indicated above, the computed TCLP selenium limit is:

$$VF \times \text{mean} = 1.487 \times 37.8 = 56.2 \text{ mg/l TCLP selenium}$$

The variance criterion for this petition is 56 mg/l.

It is interesting to point out that this criterion is very nearly the same as the 51 mg/l criterion EPA has previously approved for a similar selenium bearing waste generated from a similar type of plant.

TABLE 4
Summary of TCLP Results From Stabilization
Guardian Waste Samples Using the EPA Variance Recipe

Guardian Sample No.	1183982	1183983	1184103	1184104	1184340	
Sample Date	3/6/03	3/7/03	3/7/03	3/8/03	3/6/03	
Selenium Content (%)	6.7%	5.8%	6.0%	7.2%	6.3%	
Lab Stabilization Date:	3/26/2003	3/26/2003	3/26/2003	3/26/2003	3/26/2003	LDR
Stab. Recipe (cement : FSH : waste):	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	Criterion
Lab ID Number:	A623858	A623859	A623860	A623861	A623862	(mg/l)
TCLP results (mg/l)	Test 1	Test 2	Test 3	Test 4	Test 5	
Arsenic	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	5.0
Barium	0.38	0.42	0.35	0.36	0.38	21
Cadmium	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	0.11
Chromium	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	0.60
Lead	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	0.75
Nickel	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	11
Selenium	45	28	38	40	38	5.7
Silver	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	0.014
Mercury	bdl (0.0020)	bdl (0.0020)	bdl (0.0020)	bdl (0.0020)	bdl (0.0020)	0.025
Antimony	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	1.15
Beryllium	bdl (0.020)	bdl (0.020)	bdl (0.020)	bdl (0.020)	bdl (0.020)	1.22
Thallium	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.10)	bdl (0.050)	0.20
Vanadium	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	1.6
Zinc	bdl (0.10)	bdl (0.10)	bdl (0.10)	bdl (0.10)	bdl (0.10)	4.3

bdl = below detection limits (at __ mg/l)

4.6. Field Operations

As has been pointed out by EPA in their previous variance approvals (see page 28389 in May 26, 1999 Federal Register in Appendix A), the variance, if approved, is for a numerical treatment standard. As has been approved for others, Heritage may use any reagent it chooses in meeting the standard. However, it is acknowledged that Heritage would need to keep the reagent to waste ratios within acceptable bounds to avoid questions of impermissible dilution.

Heritage proposes to stabilize this waste at our RCRA permitted treatment facility in Indianapolis, Indiana (IND 093219012) in accordance the treatability variance criterion for selenium proposed herein. The stabilization will be performed in a permitted unit that conforms to the requirements for containment buildings at 40 CFR Part 264 Subpart DD. The stabilized material will be disposed in Heritage's Subtitle C landfill (IND 980503890).

After EPA approval of this petition, Heritage will comply with the waste analysis requirements for restricted wastes, which are found at 40 CFR 268.7, which pertain to testing, tracking, record keeping of wastes.

5.0 REFERENCES

- US EPA (Rosengrant and Fargo), "Final Best Demonstrated Available Technology (BDAT) Background Document for K031, K084, K101, K102, Characteristic Arsenic Wastes (D004), Characteristic Selenium Wastes (D010), and P and U Wastes Containing Arsenic and Selenium Listing Constituents," US EPA Office of Solid Waste, EPA/530-SW-90-059A (May 1990).
- US EPA (Jones), "Final - Best Demonstrated Available Technology (BDAT) Background Document For Quality Assurance/Quality Control Procedures and Methodology," US EPA Office of Solid Waste, EPA/530-R-92-002 (October 23, 1991).
- US EPA, "Variance Assistance Document: Land Disposal Restrictions Treatability Variances & Determinations of Equivalent Treatment," US EPA Office of Solid Waste (document not dated).

*LDR Treatability Variance Petition
Heritage Environmental Services, LLC
Indianapolis, Indiana
May 7, 2003*

Appendix A
Variances Granted For Similar Wastestreams

Dated: October 13, 1998.

Janet L. Andersen,

Director, Biopesticides and Pollution
Prevention Division, Office of Pesticide
Programs.

Therefore, it is proposed that 40 CFR
chapter I be amended as follows:

PART 180—[AMENDED]

1. The authority citation for part 180
continues to read as follows:

Authority: 21 U.S.C. 346a and 371.

§ 180.224 [Removed]

2. By removing § 180.224 *Gibberellins;
tolerances for residues*.

3. In § 180.1016 by revising paragraph
(a) to read as follows:

**§ 180.1016 Ethylene; exemption from the
requirement of a tolerance.**

* * * * *

(a) For all food commodities, it is
used as a plant regulator on plants,
seeds, or cuttings and on all food
commodities after harvest and when
applied in accordance with good
agricultural practices.

* * * * *

§ 180.1042 [Removed]

4. By removing § 180.1042 *Aqueous
extract of seaweed meal; exemption
from the requirement of a tolerance*.

5. By revising § 180.1098, to read as
follows:

**§ 180.1098 Gibberellins [Gibberellic Acids
(GA₃ and GA₄ + GA₇), and Sodium or
Potassium Gibberellate]; exemption from
the requirement of a tolerance.**

An exemption from the requirement
of a tolerance is established for residues
of gibberellins [gibberellic acids (GA₃
and GA₄ + GA₇), and sodium or
potassium gibberellate] in or on all food
commodities when used as plant
regulators on plants, seeds, or cuttings
and on all food commodities after
harvest in accordance with good
agricultural practices.

§ 180.1099 [Removed]

6. By removing § 180.1099 *Indole
butyric acid (IBA); exemption from the
requirement of a tolerance*.

7. In § 180.1159 by revising paragraph
(a) to read as follows:

**§ 180.1159 Pelargonic acid; exemption
from the requirement of tolerances.**

(a) An exemption from the
requirement of a tolerance is established
for residues of pelargonic acid in or on
all food commodities when used as a
plant regulator on plants, seeds, or
cuttings and on all food commodities

after harvest in accordance with good
agricultural practices.

* * * * *

8. By adding new § 180.1157 and
§ 180.1158 to read as follows:

**§ 180.1157 Cytokinins; exemption from the
requirement of a tolerance.**

An exemption from the requirement
of a tolerance is established for residues
of cytokinins (specifically; aqueous
extract of seaweed meal and kinetin) in
or on all food commodities when used
as plant regulators on plants, seeds, or
cuttings and on all food commodities
after harvest in accordance with good
agricultural practices.

**§ 180.1158 Auxins; exemption from the
requirement of a tolerance.**

An exemption from the requirement
of a tolerance is established for residues
of auxins (specifically; indole-3-acetic
acid and indole-3-butyric acid) in or on
all food commodities when used as
plant regulators on plants, seeds, or
cuttings and on all food commodities
after harvest in accordance with good
agricultural practices.

[FR Doc. 98-28360 Filed 10-22-98; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[FRL-6179-4]

Land Disposal Restrictions: Notice of Intent To Grant a Site-Specific Treatment Variance to Chemical Waste Management, Inc.

AGENCY: Environmental Protection
Agency.

ACTION: Proposed rule.

SUMMARY: The United States
Environmental Protection Agency (EPA
or Agency) is today proposing to grant
a site-specific treatment variance from
the Land Disposal Restriction (LDR)
standards for two specific hazardous
wastes to be stabilized by Chemical
Waste Management, Inc. (CWM) at their
Kettleman Hills facility in Kettleman
City, California. These wastes have been
classified as D010, as well as D004,
D006, D007, and D008. CWM requests
this variance because the wastes of
concern cannot be treated to the
treatment standard of 5.7 mg/L TCLP
(63 FR 28556, May 26, 1998) for
nonwastewater forms of D010 waste.
The chemical properties of the wastes in
question appear to differ significantly
from the waste used to establish the
LDR standard. Accordingly, the Agency

today proposes to grant a site-specific
treatment variance to CWM from the
selenium treatment standard for the two
wastes discussed in this proposal. The
Agency is proposing an alternate
treatment standard of 51 mg/L TCLP for
the waste generated by Owens
Brockway Glass Container Company,
and 25 mg/L TCLP for the waste
generated by Ball-Foster Glass Container
Corporation.

If this proposal is finalized, CWM
may land dispose of these two treated
wastes in a RCRA Subtitle C landfill
provided they comply with the
specified alternate treatment standard
for selenium nonwastewaters and they
meet all other applicable LDR treatment
standards. Furthermore, the Agency
proposes to grant this variance for a
period of three years. During this
period, the Agency will request the
petitioner to submit information on
whether new technologies have become
available to treat these wastes to the
national treatment level of 5.7 mg/L
TCLP and also whether some type of
vitrification or recovery technology can
be employed to recover and/or treat the
selenium component of the waste in
lieu of stabilization. Note that waste
already disposed of pursuant to the
standard established in a treatment
variance would be lawfully disposed,
and would not have to be retreated if the
standard in the variance were altered or
lapsed.

DATES: EPA is requesting comments on
today's proposed decision. Comments
will be accepted until November 13,
1998. Comments postmarked after the
close of the comment period will be
stamped "late" and may or may not be
considered by the Agency.

ADDRESSES: Commenters must send an
original and two copies of their
comments referencing Docket Number
F-98-CWMP-FFFFF to: RCRA Docket
Information Center, Office of Solid
Waste (5305G), U.S. Environmental
Protection Agency Headquarters (EPA,
HQ), 401 M Street, SW, Washington, DC
20460. Hand deliveries of comments
should be made to the Arlington, VA,
address below. Comments may also be
submitted electronically through the
Internet to: rcra-
docket@epamail.epa.gov. Comments in
electronic format should also be
identified by the docket number F-98-
CWMP-FFFFF. All electronic comments
must be submitted as an ASCII file
avoiding the use of special characters
and any form of encryption.

Commenters should not submit
electronically any confidential business
information (CBI). An original and two
copies of CBI must be submitted under

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separate cover to: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, 401 M Street, SW, Washington, DC 20460.

Public comments and supporting materials are available for viewing in the RCRA Information Center (RIC), located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, it is recommended that the public make an appointment by calling (703) 603-9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost \$0.15/page. The index and some supporting materials are available electronically. See the Supplementary Information section for information on accessing them.

The index is available on the Internet. Follow these instructions to access the information electronically:

WWW: <http://www.epa.gov/epaoswer/osw/hazwaste.htm#ldr>

FTP: [ftp.epa.gov](ftp://ftp.epa.gov)

Login: anonymous

Password: your Internet address

Files are located in /pub/epaoswer

FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA Hotline at 800 424-9346 or TDD 800 553-7672 (hearing impaired). In the Washington, DC, metropolitan area, call 703 412-9810 or TDD 703 412-3323. For more detailed information on specific aspects of this rulemaking, contact Elaine Eby at (703) 308-8449 or EBY.ELAINE@epamail.epa.gov, or Josh Lewis at (703) 308-7877 or LEWIS.JOSH@epamail.epa.gov, Office of Solid Waste (5302 W), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

SUPPLEMENTARY INFORMATION:

I. Background

The official record for this action will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into paper form and place them in the official record, which will also include all comments submitted directly in writing. The official record is the paper record maintained at the address in **ADDRESSES** at the beginning of this document.

EPA responses to comments, whether the comments are written or electronic, will be in a notice in the **Federal Register** or in a response to comments document placed in the official record for this rulemaking. EPA will not immediately reply to commenters electronically other than to seek clarification of electronic comments that

may be garbled in transmission or during conversion to paper form, as discussed above.

Paperless Office Effort

EPA is asking prospective commenters to voluntarily submit one additional copy of their comments on labeled personal computer diskettes in ASCII (TEXT) format or a word processing format that can be converted to ASCII (TEXT). It is essential to specify on the disk label the word processing software and version/edition as well as the commenter's name. This will allow EPA to convert the comments into one of the word processing formats utilized by the Agency. Please use mailing envelopes designed to physically protect the submitted diskettes. EPA emphasizes that submission of comments on diskettes is not mandatory, nor will it result in any advantage or disadvantage to any commenter. This expedited procedure is in conjunction with the Agency "Paperless Office" campaign. For further information on the submission of diskettes contact Josh Lewis of the Waste Treatment Branch at (703) 308-7877.

A. Authority

Under section 3004(m) of the Resource Conservation and Recovery Act (RCRA), EPA is required to set "levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." EPA has interpreted this language to authorize treatment standards based on the performance of best demonstrated available technology (BDAT). This interpretation was sustained by the court in *Hazardous Waste Treatment Council v. EPA*, 886 F.2d 355 (D.C. Cir. 1989). The Agency has recognized that there may be wastes that cannot be treated to levels specified in the regulations (see 40 CFR 268.40) because an individual waste matrix or concentration can be substantially more difficult to treat than those wastes the Agency evaluated in establishing the treatment standard (51 FR 40576, November 7, 1986). For such wastes, EPA established a treatment variance (40 CFR 268.44) that, if granted, becomes the treatment standard for the waste at issue.

B. Summary of Petition

On May 12, 1997, the Agency published "Land Disposal Restrictions Phase IV: Second Supplemental

Proposal on Treatment Standards for Metal Wastes and Mineral Processing Wastes, Mineral Processing and Bevill Exclusion Issues, and the Use of Hazardous Waste as Fill" (62 FR 26041). In this proposal, the Agency proposed to revise the Universal Treatment Standard (UTS) for selenium nonwastewaters from 0.16 mg/L TCLP to 5.7 mg/L TCLP. The Agency also proposed to apply the revised UTS standard to D010 nonwastewaters (D010 denotes a waste that is characteristically hazardous for selenium).

On August 12, 1997, CWM submitted comments on the supplemental proposed rule. CWM stated that the standards for selenium should be raised and reiterated an earlier suggestion that EPA establish a High Selenium >200 ppm subcategory for nonwastewaters, with the establishment of a treatment standard of 10 mg/L TCLP, because of the technical problems in achieving lower levels for more highly-concentrated selenium waste streams. CWM stated that it had consistently experienced problems treating waste streams from glass manufacturing companies to the current level of 5.7 mg/L TCLP. To further illustrate this point, CWM provided treatability testing data from a selenium-contaminated waste stream (untreated TCLP of 80.13 mg/L), which showed that CWM formulated 16 different treatment recipes prior to targeting one which could possibly treat a selenium waste to below the 5.7 mg/L standard.

On October 20, 1997, per the Agency's request for additional information on the facility's selenium treatment using stabilization, CWM submitted additional testing data from their Kettleman Hills, California facility. These data consisted of bench-scale stabilization treatment testing for selenium-bearing wastes generated from various glass manufacturing companies. The wastes contained leachate concentrations of selenium ranging from 76.3 to 1024 mg/L TCLP. Stabilization tests were submitted on three different selenium waste streams using various combinations of the following stabilization reagents: ferrous sulfate, calcium polysulfide, ferric chloride, sodium bisulfate, portland cement, and cement kiln dust. Data from these tests showed that more than 60 different stabilization recipes failed to meet the selenium treatment standard of 5.7 mg/L TCLP, with only five recipes achieving compliance.

In the Phase IV Final Rule, the Agency determined that a treatment standard of 5.7 mg/L TCLP was appropriate for D010 nonwastewaters (63 FR 28556, May 26, 1998). However,

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the Agency further concluded that high-level selenium waste streams, in particular the waste streams for which data was submitted by CWM, were unable to achieve the 5.7 mg/L TCLP standard. The Agency suggested that it would propose a site-specific treatment variance for these high selenium waste streams being treated by CWM in the near future. Id.

II. Basis for Determination

Under 40 CFR 268.44(h), EPA allows facilities to apply for a site-specific variance in cases where a waste that is generated under conditions specific to only one site cannot be treated to the specified levels. In such cases, the generator or treatment facility may apply to the Administrator, or EPA's delegated representative, for a site-specific variance from a treatment standard. The applicant for a site-specific variance must demonstrate that, because the physical or chemical properties of the waste differ significantly from the waste analyzed in developing the treatment standard, the waste cannot be treated by BDAT to specified levels or by the specified methods. Note that there are other grounds for obtaining treatment variances, but this is the only provision relevant to the present petition.

CWM formally submitted their request for a treatment variance by subsequent letter.¹ CWM also sent comments in support of the Land Disposal Restrictions Phase IV—Second Supplemental (62 FR 26041, May 12, 1997) as well as additional supplemental information. The Agency has used this information in evaluating the variance request by CWM. All information and data used in the development of this proposed treatment variance can be found in the RCRA docket supporting this proposal.

A. Establishment of BDAT for Selenium

In the Third Third rule (55 FR 22521, June 1, 1990), the Agency developed performance standards for selenium based on stabilization as BDAT. At that time, EPA had information indicating that wastes containing high concentrations of selenium were rarely generated and land disposed. The Agency also stated that it believed that for most waste containing high concentrations of selenium, recovery of the selenium was feasible using recovery technologies currently employed by copper smelters and copper refining operations. The Agency

further stated that it did not have any performance data for selenium recovery, but available information indicated that recovery of elemental selenium out of certain types of scrap material and other types of waste was practiced in the United States. No comments or data were received on this issue in the Third Third rulemaking docket. Consequently, to establish the treatment standard, the Agency used performance data from the stabilization of a D010 mineral processing waste, which it determined to be the most difficult to treat selenium waste. This waste contained up to 700 ppm total selenium and 3.74 mg/L selenium in the TCLP leachate. The selenium levels in treated residuals were between 1.80 and 0.154 mg/L TCLP. This waste also contained high concentrations of arsenic, cadmium, and lead. The binder to waste ratios varied from 1.3 to 2.8.

B. Chemical Properties and Treatability Information on CWM's Selenium Wastes

The two waste streams at issue here appear to be significantly different from the wastes used to set the treatment standard, and the current treatment standard of 5.7 mg/L TCLP for D010 nonwastewaters is not attainable using BDAT on these two wastes. The first waste stream, generated by Owens Brockway Glass Container Company, Vernon, California and identified by CWM in the petition documents as D79726, is electrostatic precipitator dust generated during glass manufacturing operations. Presently, CWM is storing 130 cubic yards of this unprocessed waste on-site. An additional forty cubic yards have been treated but fail to meet the standard of 5.7 mg/L TCLP. The generator estimates a monthly generation rate of 40 cubic yards.

D79726 is characterized as a grey and white solid containing no free liquids or organic constituents. It consists of 50–60% salt cake and 40–50% soda ash. Concentrations of selenium in the untreated waste have been measured between 80.13 and 1024 mg/L TCLP. The waste also has significant concentrations of arsenic, cadmium, chromium, and lead and has exhibited the following additional waste code listings: D004, D006, D007, and D008.

Three samples or batches of the waste were tested to determine appropriate stabilization recipes. A summary of these samples is presented in Table I. For Batch 96222928 (581 mg/L TCLP selenium in the untreated sample), CWM tested nine different recipes, with reagent to waste ratios ranging between 0.6 and 4.3. Reagents included iron sulfate, cement and cement kiln dust. Treated selenium TCLP concentrations

for Batch 96222928 ranged from 4.34 to 228 mg/L TCLP. Batch 96222929 contained 1024 mg/L TCLP selenium in the untreated waste. Thirty-three different recipes were tested with treated concentrations of selenium ranging from 5.23 to 290.5 mg/L TCLP, with reagent to waste ratios ranging from 0.6 to 5.0. Batch 96222930 contained 465 mg/L TCLP selenium in the untreated waste and was tested using nine recipes with reagent to waste ratios ranging from 1.3 to 4.4. Concentrations of selenium in the treated waste ranged from 11.3 mg/L to 109 mg/L TCLP.

TABLE I.—SUMMARY OF OWENS BROCKWAY SELENIUM WASTE

Batch No.	Untreated Se TCLP (mg/L)	Treated Se TCLP range (mg/L)
96222928	581	4.34–228.
96222929	1024	5.23–290.5.
96222930	465	11.3–109.

The second waste stream, generated by the Ball-Foster Glass Container Corporation, El Monte, California and identified in CWM documents as DZ2050, is dry scrubber solid from glass manufacturing. CWM's waste profile identified the selenium concentrations in the untreated waste as 20.9 mg/L TCLP. It also identifies the waste as characteristic for lead (D008). Presently, none of this waste is being stored at the CWM facility; however, the generator anticipates a quarterly generation rate of twenty cubic yards. The untreated leachate concentration for selenium in the waste stream sample used to develop a treatment recipe was measured at 59.8 mg/L TCLP, with a lead concentration of 5.79 mg/L TCLP and an arsenic concentration of 5.70 mg/L TCLP. CWM tested 20 different stabilization recipes on the waste. Treated concentrations for selenium ranged from 1.83 mg/L TCLP to 50.6 mg/L TCLP, with reagent to waste ratios ranging from 0.3 to 5.0.

The Agency has reviewed the information submitted by CWM on these two waste streams and believes that, as demonstrated by the data, both wastes satisfy the criteria of differing significantly in chemical composition from the waste that was used to generate the treatment standard. Selenium TCLP concentrations in untreated D79726 waste are one to three orders of magnitude higher than the waste used to calculate the treatment standard. Similarly, untreated TCLP concentrations of selenium in DZ2050 were measured an order of magnitude

¹ Letter to Fred Chanania, USEPA, from Mitchell Hahn, Chemical Waste Management, Inc., July 30, 1998.

higher. Furthermore, the treatment being employed by the petitioner is consistent with EPA's determination of BDAT and the process used is well-designed and operated. It should be noted that it is difficult, if not impossible, to optimize treatment for selenium when other metals are being treated, because the selenium solubility curve differs from that for most other metals. Thus, successfully stabilizing other metals generally means that treatment for selenium cannot be optimized (see 63 FR 28569, plus further explanation provided below). Therefore, EPA is seeking comment on this proposed site-specific treatment variance for two high selenium waste streams generated by glass manufacturing operations.

III. Alternative Treatment Standard for D010

As discussed above, the data demonstrate that the waste used to generate the treatment standard differs significantly from the wastes that may be treated by CWM, which supports our view that wastes containing high concentrations of selenium are not easily treated using the BDAT technology of stabilization. As previously acknowledged and discussed by the Agency in a past rulemaking (see 62 FR 26041), wastes with selenium concentrations greater than 1.0 mg/L TCLP in the presence of other metals, e.g., cadmium, lead or chromium, may encounter difficulties in stabilization. This is due to a difference in pH/solubility curves: selenium's minimum solubility is at a neutral to mildly acidic pH (6.5-7.5) while other characteristic metals have a minimum solubility in the alkaline pH range (8-12) (62 CFR 26045).

EPA has determined, in analyzing the data on D79726 (waste generated by Owens Brockway Glass Container Company), the most effective stabilization recipe for this waste consists of 0.7 parts iron sulfate combined with 2.0 parts cement, resulting in a reagent to waste ratio of 2.7 to 1. For each of the three analytical trials submitted for the waste stream, this specific recipe achieved 36.8, 34.08, and 43.7 mg/L selenium TCLP in the treated waste. While the data indicated that other recipes achieved lower TCLP values (4.34 to 28.51 mg/L), these reagent to waste ratios all exceeded 4.0 to 1. The Agency questions whether such a high reagent to waste ratio is either effective or optimized treatment. High reagent to waste ratios can lead to questions of impermissible dilution.

As part of their petition, CWM has stated that reagent to waste ratios of 1

or less are preferred, and we generally concur. In the Phase IV rule, the Agency did not generally use stabilization data with reagent to waste ratios greater than 1 (See: "Final Draft Site Visit Report for the August 20-21 Site Visit to Rollins Environmental's Highway 36 Commercial Waste Treatment Facility Located in Deer Trail, Colorado" November 21, 1996 and the economic analysis supporting the Phase IV final rule). However, in the case for selenium, the existing treatment standard, as discussed earlier, was calculated from data with reagent to waste ratios ranging from 1.8 to 2.7. Based on the Agency's review of the performance data and the reagent to waste ratios used to calculate the current treatment standard of 5.7 mg/L TCLP, we conclude that a reagent to waste ratio of 2.7 is optimized treatment for the selenium waste generated by Owens Brockway Glass Container Company. Using the BDAT methodology,² the Agency has calculated an alternative treatment standard of 51 mg/L TCLP based on three data points (36.8, 34.08 and 43.7) that were the result of stabilization treatment using a reagent to waste ratio of 2.7 for the waste identified as D79726 and generated by Owens Brockway.

For the second waste stream, identified as DZ2050 and generated by the Ball-Foster Glass Container Corporation, treatment data submitted to the Agency indicate that the most effective treatment is achieved using the reagent to waste ratios of 1.8, 2.2, 2.3, 2.4, and 2.7. Treated waste concentrations for selenium were as follows: 11.6, 7.47, 8.22, 15.6, and 4.82 mg/L TCLP. These treatment recipes are all consistent with the reagent to waste ratios used to establish the existing standard of 5.7 mg/L TCLP. Using these five data points, the Agency has calculated an alternative treatment standard of 25 mg/L TCLP for the D010 waste generated by Ball-Foster.

IV. Request for Comment

Based on the foregoing, the Agency proposes to grant CWM's petition for a site-specific treatment variance for the two D010 waste streams for a period of three years. We are proposing to limit the proposed treatment variance to three years to encourage CWM to continue researching new stabilization, vitrification, and recovery technologies that may more effectively deal with these two waste streams. Again, please note that waste already disposed of pursuant to the standard established in

² BDAT Background Document for Quality Assurance/Quality Control Procedures and Methodology, October 23, 1991.

a treatment variance would be lawfully disposed, and would not have to be retreated if the standard in the variance were altered or lapsed. The Agency requests comments on all aspects of this proposal, especially with regard to the necessity for a separate high selenium treatability group, the proposed reagent to waste ratio of 2.7 to 1 for the selenium waste generated by Owens Brockway, the performance of stabilization technologies, and the proposed duration of the variance. Any information on glass manufacturing wastes would also be particularly useful to the Agency.

Should the Agency grant this variance, we would amend 40 CFR part 268 to note that the D010 waste from Ball-Foster Glass Container Corporation would be subject to a selenium TCLP of 25 mg/L, and the D010 waste from Owens Brockway Glass Container Company would be subject to a selenium TCLP of 51 mg/L. Both wastes would be treated by Chemical Waste Management, Inc. at their Kettleman Hills facility in Kettleman City, California. This variance would be effective for three years.

V. Administrative Requirement

A. Executive Order 12866

This proposed treatment variance does not create any new regulatory requirements. It merely establishes alternative treatment standards for specific wastes which replace standards already in effect. This proposed rule is, therefore, not a "significant" regulatory action within the meaning of Executive Order 12866. Because this proposed variance only changes the treatment standards applicable to two D010 waste streams at the Chemical Waste Management, Inc. facility in Kettleman City, California, and does not change in any way the paperwork requirements already applicable to these wastes, it does not affect requirements under the Paperwork Reduction Act.

B. Executive Order 12875

Under E.O. 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a state, local, or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments. If the mandate is unfunded, EPA must provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected state, local, and tribal governments, the nature of their concerns, copies of written

communications from the governments, and a statement supporting the need to issue the regulation. In addition, E.O. 12875 requires EPA to develop an effective process permitting elected officials and other representatives of state, local, and tribal governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates." Today's proposed rule does not create a mandate on state, local or tribal governments. The proposed rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of E.O. 12875 do not apply to this proposed rule.

C. Executive Order 13045

Today's proposed variance is not subject to E.O. 13045, entitled "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because this action is not an economically significant proposal, and it is not expected to create any environmental health risks or safety risks that may disproportionately affect children. The wastes described in this proposal will be treated by Chemical Waste Management, Inc., and then disposed of in a RCRA Subtitle C landfill, ensuring that there will be no risks that may disproportionately affect children.

D. Executive Order 13084

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If the mandate is unfunded, EPA must provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities." Today's proposed rule does not significantly or uniquely affect

the communities of Indian tribal governments. The proposal is to issue a variance from treatment standards established in the recently promulgated LDR Phase IV Rule for TC metal hazardous wastes. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this proposed rule.

E. Executive Order 12898

EPA is committed to addressing environmental justice concerns and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all residents of the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income bears disproportionately high and adverse human health and environmental impacts as a result of EPA's policies, programs, and activities, and that all people live in clean and sustainable communities. In response to Executive Order 12898 and to concerns voiced by many groups outside the Agency, EPA's Office of Solid Waste and Emergency Response formed an Environmental Justice Task Force to analyze the array of environmental justice issues specific to waste programs and to develop an overall strategy to identify and address these issues (OSWER Directive No. 9200.3-17). Today's proposed variance applies to two D010 waste streams that will be treated by Chemical Waste Management, Inc. at their Kettleman City, California facility and disposed of in a RCRA Subtitle C landfill, ensuring protection to human health and the environment. Therefore, the Agency does not believe that today's proposal will result in any disproportionately negative impacts on minority or low-income communities relative to affluent or non-minority communities.

F. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to

identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments; enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates; and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's proposed rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local, or tribal governments or the private sector, and does not impose any Federal mandate on State, local, or tribal governments or the private sector within the meaning of the Unfunded Mandates Reform Act of 1995. This proposed rule also does not create new regulatory requirements; rather, it merely establishes alternative treatment standards for specific wastes which replace standards already in effect. EPA has determined that this proposed rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. For the same reasons, EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments.

G. Regulatory Flexibility Act

This proposed treatment variance does not create any new regulatory requirements. It merely establishes alternative treatment standards for a specific waste which replace standards already in effect, and it only applies to the Chemical Waste Management, Inc. facility in Kettleman City, California. Thus, this proposed rule would not have a significant impact on a

substantial number of small entities. Therefore, EPA provides the following certification under the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act: Pursuant to the provision at 5 U.S.C. 605(b), I hereby certify that this proposed rule will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This proposed rule, therefore, does not require a regulatory flexibility analysis.

H. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub. L. 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. There are no voluntary consensus technical standards directly applicable to metal contaminants in hazardous waste that exhibit the toxicity characteristic for metals. Therefore, EPA did not consider the use of any voluntary standards in this proposal.

I. Submission to Congress and the General Accounting Office

The Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) provides, with limited exceptions, that no rule promulgated on or after March 29, 1996 may take effect until it is submitted to Congress and the Comptroller General along with specified supporting documentation. However, this requirement does not apply to "any rule of particular applicability." * * * 5 U.S.C. 804(3). The proposed rule is of particular applicability, applying only to a particular waste at one facility under particular (and, as noted, exceptional) circumstances. Consequently, the Congressional review provisions of SBREFA are not applicable and this rule, if accepted, can take effect without submittal to Congress.

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste.
Matthew Hale,
Acting Director, Office of Solid Waste.
[FR Doc. 98-28487 Filed 10-22-98; 8:45 am]
BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 271

[FRL-6176-4]

Hazardous Waste Management Program: Final Authorization of State Hazardous Waste Management Program for Louisiana

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA proposes to approve Louisiana Department of Environment Quality's (LDEQ) Clusters V and VI Hazardous Waste Program under the Resource Conservation and Recovery Act. In the rule section of this **Federal Register** (FR), the EPA is approving the State's request as an immediate final rule without prior proposal because the EPA views this action as noncontroversial and anticipates no adverse comments. A detailed rationale for approving the State's request is set forth in the immediate final rule. If no adverse written comments are received in response to that immediate final rule, no further activity is contemplated in relation to this proposed rule. If EPA receives adverse written comments, a second FR document will be published before the time the immediate final rule takes effect. The second document may withdraw the immediate final rule or identify the issues raised, respond to the comments and affirm that the immediate final rule will take effect as scheduled. Any parties interested in commenting on this action should do so at this time.

DATES: Written comments must be received on or before November 23, 1998.

ADDRESSES: Written comments referring to Docket Number LA98-1 may be mailed to Alima Patterson, Region 6 Authorization Coordinator, Grants and Authorization Section (6PD-G), Multimedia Planning and Permitting Division, at the address listed below. Copies of the materials submitted by LDEQ may be examined during normal business hours at the following locations: EPA Region 6 Library, 12th Floor, Wells Fargo Bank Tower at

Fountain Place, 1445 Ross Avenue, Dallas, Texas 75202-2733, Phone number: (214) 665-6444. Louisiana Department of Environmental Quality, H.B. Garlock Building, 7290 Bluebonnet, Baton Rouge, Louisiana 70810, Phone number (504) 765-0617.

FOR FURTHER INFORMATION CONTACT: Alima Patterson, (214) 665-8533.

SUPPLEMENTARY INFORMATION: For additional information see the immediate final rule published in the rules section of this **Federal Register**.

Jerry Clifford,

Deputy Regional Administrator, Region 6.

[FR Doc. 98-27705 Filed 10-22-98; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 271

[FRL-6166-4]

North Carolina; Final Authorization of Revisions to State Hazardous Waste Management Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA proposes to grant final authorization to the hazardous waste program revisions submitted by North Carolina. In the final rules section of this **Federal Register**, EPA is authorizing the State's program revisions as an immediate final rule without prior proposal because EPA views this action as noncontroversial and anticipates no adverse comments. A detailed rationale for the authorization is set forth in the immediate final rule. If no adverse written comments are received, the immediate final rule will become effective and no further activity will occur in relation to this proposal. If EPA receives adverse written comments, EPA will withdraw the immediate final rule before its effective date by publishing a withdrawal in the **Federal Register**. EPA will then respond to public comments in a later final rule based on this proposal. EPA may not provide further opportunity for comment. Any parties interested in commenting on this action should do so at this time.

DATES: Written comments must be received on or before November 23, 1998.

ADDRESSES: Mail written comments to Narindar Kumar, Chief, RCRA Programs Branch, Waste Management Division, U.S. Environmental Protection Agency, The Sam Nunn Atlanta Federal Center,

deposits and fees shall be forwarded to the Environmental Protection Agency, Headquarters Accounting Operations Branch, Office of Pesticide Programs (Tolerance Fees), P.O. Box 360277M, Pittsburgh, PA 15251. The payments should be specifically labeled "Tolerance Petition Fees" and should be accompanied only by a copy of the letter or petition requesting the tolerance. The actual letter or petition, along with supporting data, shall be forwarded within 30 days of payment to the Environmental Protection Agency, Office of Pesticide Programs, Registration Division, (7504C) Washington, DC 20460. A petition will not be accepted for processing until the required fees have been submitted. A petition for which a waiver of fees has been requested will not be accepted for processing until the fee has been waived or, if the waiver has been denied, the proper fee is submitted after notice of denial. A request for waiver or refund will not be accepted after scientific review has begun on a petition.

(c) This fee schedule will be changed annually by the same percentage as the percent change in the Federal General Schedule (GS) pay scale. In addition, processing costs and fees will periodically be reviewed and changes will be made to the schedule as necessary. When automatic adjustments are made based on the GS pay scale, the new fee schedule will be published in the **Federal Register** as a Final Rule to become effective 30 days or more after publication, as specified in the rule. When changes are made based on periodic reviews, the changes will be subject to public comment.

[FR Doc. 99-13191 Filed 5-25-99; 8:45 am]

BILLING CODE 6560-50-F

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[FRL-6346-2]

Land Disposal Restrictions: Site-Specific Treatment Variance to Chemical Waste Management, Inc.

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The United States Environmental Protection Agency (EPA or Agency) is today granting a site-specific treatment variance from the Land Disposal Restrictions (LDR) treatment standards for two selenium-bearing hazardous wastes. EPA is granting this variance because the

chemical properties of these two wastes differ significantly from the waste used to establish the current LDR standard for selenium (5.7 mg/L TCLP) and Chemical Waste Management, Inc. (CWM) has adequately demonstrated that the two wastes cannot be treated to meet this treatment standard.

CWM intends to stabilize the wastes at their Kettleman City, California facility. Upon promulgation of this final rule, CWM may treat these two specific wastes to alternate treatment standards of 51 mg/L TCLP for the Owens-Brockway waste and 25 mg/L TCLP for the Ball-Foster waste. After treatment to these alternative selenium standards, CWM may dispose of the treated wastes in a RCRA Subtitle C landfill provided they meet the applicable LDR treatment standards for the other hazardous constituents in the wastes. We are granting this variance for three years.

DATES: This final rule is effective on May 11, 1999.

ADDRESSES: The official record for this rulemaking is identified by RCRA Docket Number F-1999-CWMF-FFFFF and is located at the RCRA Information Center (RIC), located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, it is recommended that the public make an appointment by calling (703) 603-9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost \$0.15/page. The index and some supporting materials are available electronically. Follow these instructions to access the information electronically:

WWW: <http://www.epa.gov/epaoswer/osw/hazwaste.htm#ldr>

FTP: <ftp://ftp.epa.gov>

Login: anonymous

Password: your Internet address

Files are located in /pub/epaoswer.

FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA Hotline at 800 424-9346 or TDD 800 553-7672 (hearing impaired). In the Washington, D.C., metropolitan area, call 703 412-9810 or TDD 703 412-3323. For more detailed information on specific aspects of this rulemaking, contact Josh Lewis at (703) 308-7877 or lewis.josh@epa.gov, or Elaine Eby at (703) 308-8449 or eby.elaine@epa.gov, Office of Solid Waste (5302 W), U.S. Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460.

SUPPLEMENTARY INFORMATION:

I. Background

A. What Is the Basis for LDR Treatment Variances?

Under section 3004(m) of the Resource Conservation and Recovery Act (RCRA), EPA is required to set "levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." EPA interprets this language to authorize treatment standards based on the performance of best demonstrated available technology (BDAT). This interpretation was upheld by the D.C. Circuit in *Hazardous Waste Treatment Council vs. EPA*, 886 F.2d 355 (D.C. Cir. 1989).

The Agency recognizes that there may be wastes that cannot be treated to levels specified in the regulations (see 40 CFR 268.40) because an individual waste matrix or concentration can be substantially more difficult to treat than those wastes the Agency evaluated in establishing the treatment standard (51 FR 40576; November 7, 1986). For such wastes, EPA has a process by which a generator or treater may seek a treatment variance. See 40 CFR 268.44. If granted, the terms of the variance establish an alternative treatment standard for the particular waste at issue.

B. What Is the Basis of the Current Selenium Treatment Standard?

In the Third rule (55 FR 22521, June 1, 1990), the Agency used performance data from the stabilization of a selenium D010 mineral processing waste, which we determined to be the most difficult to treat selenium waste, to set the national treatment standard for selenium. This waste contained up to 700 ppm total selenium and 3.74 mg/L selenium in the TCLP leachate. The resulting post-treatment selenium TCLP levels were between 1.80 and 0.154 mg/L TCLP, which led to our establishment of a national treatment standard of 5.7 mg/L for D010 selenium nonwastewaters. At that time, EPA also had information indicating that wastes containing high concentrations of selenium are rarely generated and land disposed and, therefore, concluded that the standard of 5.7 mg/L was achievable.

In the Phase IV final rule, the Agency determined that a treatment standard of 5.7 mg/L TCLP continued to be appropriate for D010 nonwastewaters (63 FR 28556, May 26, 1998). The Agency also changed the universal treatment standard (UTS) for selenium

nonwastewaters from 0.16 mg/L to 5.7 mg/L. In the preamble to the Phase IV final rule, we noted that we received comments from one company, CWM, indicating that it was attempting to stabilize selenium wastes with concentrations much higher than those EPA was examining to establish the national selenium standard. In response, we indicated that for these high-level selenium waste streams, we would propose a site-specific treatment variance, which we did on October 23, 1998 (63 FR 56886).

II. Basis for Today's Determination

A. What Does the CWM Petition Assert?

In their petition, CWM states that two companies, Owens Brockway and Ball-Foster, generate hazardous wastes with relatively high leachable selenium concentrations. CWM presents data showing that selenium TCLP concentrations in the untreated wastes are one to three orders of magnitude higher than the untreated mineral processing wastes that EPA used to develop the current D010 selenium treatment standard. The data also show that neither treated waste stream can reliably meet the numerical standard of 5.7 mg/L TCLP, even though CWM shows that it is using the treatment technology on which EPA based the selenium treatment standard.

Specifically, CWM's testing data consisted of bench-scale stabilization treatment testing for selenium-bearing wastes generated by Owens Brockway and Ball-Foster. Three samples of the Owens Brockway waste and one sample of the Ball Foster waste were tested to determine appropriate stabilization recipes. Selenium concentrations in the untreated Owens Brockway wastes were between 465 and 1024 mg/L TCLP, while the selenium concentration in the Ball-Foster waste was 59.8 mg/L TCLP. CWM submitted stabilization data from each facility using combinations of the following stabilization reagents: ferrous sulfate, calcium polysulfide, ferric chloride, sodium bisulfate, portland cement, and cement kiln dust. For more detailed information about this petition, see the proposed rule (63 FR 56886, October 23, 1998) and the docket supporting this proposal (docket number F-98-CWMP-FFFFF).

B. What Criteria Govern a Treatment Variance?

Under 40 CFR 268.44(h), EPA allows facilities to apply for a site-specific variance when a waste generated under conditions specific to only one site cannot be treated to the specified level(s). In such cases, the generator or

treatment facility may apply to the Administrator, or EPA's delegated representative, for a site-specific variance from a treatment standard.

In 40 CFR 268.44(h)(1) and (2), EPA describes the two main cases in which we will grant a treatment variance. The case described in 40 CFR 268.44(h)(1) is applicable to this treatment variance, which addresses process wastes that are generated on a routine basis by two glass manufacturing companies. Basically, EPA must determine if the petitioner has adequately shown that, "It is not physically possible to treat the waste to the level specified in the treatment standard . . . because the physical or the chemical properties of the waste differ significantly from the waste analyzed in developing the treatment standard. . . ."

C. What Is the Basis for EPA's Approval of CWM's Request for an Alternative D010 Treatment Standard?

After careful review of the data and petition submitted by CWM, we conclude that CWM has adequately demonstrated that the wastes satisfy the requirements for a treatment variance under 40 CFR 268.44(h)(1).

CWM has demonstrated that the two glass manufacturing waste streams differ significantly in chemical composition from the waste used to generate the original treatment standard. Selenium TCLP concentrations in the untreated wastes are one to three orders of magnitude higher than the waste used in developing the treatment standard for D010 hazardous wastes. Furthermore, CWM is using stabilization as the treatment technology, which is consistent with EPA's determination of BDAT, and the process is well-designed and operated.

Treatment of these two wastes is especially difficult because of the presence of other metals (i.e., arsenic, cadmium, chromium, and lead) above their respective characteristic levels. It is difficult, if not impossible, to optimize treatment for selenium when other metals are being treated because the selenium solubility curve differs from that of most other metals. Selenium's minimum solubility is at a neutral to mildly acidic pH (6.5–7.5) while other characteristic metals have a minimum solubility in the alkaline pH range (8–12) (see 62 FR 26045).

Therefore, EPA is today granting a site-specific variance from the D010 treatment standards for the two waste streams in question since the wastes cannot be physically treated to the level specified in the regulations. Today's alternative treatment standards will provide sufficient latitude for CWM to treat the other metals present in the

wastes to LDR treatment standards and, by raising the selenium treatment standard, will avoid the difficulty posed by the different metal solubility curves.

D. What Are the Terms and Conditions of the Variance?

This variance applies to two specific waste streams: electrostatic precipitator dust generated during glass manufacturing operations at Owens Brockway Glass Container Company, and dry scrubber solid from glass manufacturing wastes at Ball-Foster Glass Container Corporation.

In analyzing the Owens Brockway data, the most effective stabilization recipe for this waste consists of 0.7 parts iron sulfate combined with 2.0 parts cement, resulting in a reagent to waste ratio of 2.7 to 1. For each of the three analytical trials submitted for the waste stream, this specific recipe achieved 36.8, 34.08, and 43.7 mg/L selenium TCLP in the treated waste. The treatment extract had a pH ranging from 10.5–11.9, which encompasses the maximum solubility (and, therefore, leaching potential) of selenium. This, in turn, suggests that use of the TCLP in this particular case adequately reflects a worst-case disposal scenario. (This is unlike the situation in *Columbia Falls Aluminum Co. v. EPA*, 139 F.3d 914, in which the TCLP testing did not reflect the post-treatment conditions). Using the BDAT methodology,¹ we calculated an alternative D010 standard of 51 mg/L TCLP.

For Ball-Foster's waste, the most effective treatment recipes have reagent to waste ratios of 1.8, 2.2, 2.3, 2.4, and 2.7. Selenium concentrations in the treated wastes were 11.6, 7.47, 8.22, 15.6, and 4.82 mg/L TCLP. The treatment extract pH ranged from 11.9–12.0, which again suggests that use of the TCLP adequately reflects the worst case disposal scenario. These treatment recipes are all consistent with the reagent to waste ratios used to establish the existing standard of 5.7 mg/L TCLP. Using these five data points, we calculated an alternative treatment D010 standard of 25 mg/L TCLP.

After treatment to these alternative selenium standards, CWM may dispose of the treated wastes in a RCRA Subtitle C landfill—since the waste still exhibits the toxicity characteristic—provided they meet all other applicable LDR treatment standards. We are granting this variance for three years for reasons discussed in Section IV below.

¹ BDAT Background Document for Quality Assurance/Quality Control Procedures and Methodology, October 23, 1991.

Although the alternative selenium standards for these two wastes are relatively high, this is a technically necessary compromise. As noted above and in the May 12, 1997 **Federal Register** (62 FR 26045), treatment cannot be optimized for both acid and base-soluble metals due to their different solubility curves. Because all of the other toxic metals (i.e., arsenic, cadmium, chromium, and lead) are being immobilized to meet their respective universal treatment standards, we consider, under the circumstances, that threats are being minimized if the alternative selenium treatment standards are met, as required by 3004(m).

Not only are all of the other toxic metals meeting their respective UTS standards, but the alternative selenium treatment standards essentially require CWM to use a well-designed and well-operated treatment system that is consistent, particularly in terms of the selection of reagents and reagent to waste ratios, with the technical basis for the current selenium treatment standard.

III. Response to Comments

The Agency received one comment on the proposed rule from a waste treatment company that treats metal-bearing hazardous wastes, including wastes contaminated with selenium. The commenter claims to have a reagent capable of stabilizing the wastes in question so that less selenium will leach out of the treated waste. The commenter submitted data showing that its reagent is successful in stabilizing wastes containing a variety of heavy metals, including selenium.

The commenter asked to perform a treatability study on the two wastes to verify whether a variance is necessary, and to determine whether a numerical treatment standard closer to the current regulatory level of 5.7 mg/L TCLP would be achievable.

We agreed that the commenter should conduct a treatability study. From December 1998 to February 1999, the commenter treated both of the glass manufacturing waste streams using its reagent. The commenter achieved selenium TCLP results ranging from 25.0–57.7 mg/L. These results are comparable to the alternative treatment standards in the proposed variance. However, we observe two significant points in the treatability study data:

- (1) The commenter treated wastes that had significantly higher selenium concentrations than the wastes described in the proposed variance. The untreated Ball-Foster and Owens Brockway samples used in the

treatability study had selenium concentrations of 2900 mg/L TCLP and 15,200 mg/L TCLP, respectively. The untreated wastes analyzed at the time of the proposed variance had concentrations of 60–1000 mg/L TCLP.

- (2) The commenter's reagent achieved treatment levels similar to those we proposed, but with reagent to waste ratios of only 0.15–0.2 to 1. By comparison, the reagent to waste ratios used in the proposed rule were as high as 2.7 to 1.

Based on our review of the treatability study, we conclude that the wastes used in the treatability study represent the most difficult to treat Ball-Foster and Owens Brockway wastes, and that the proposed alternative treatment standards are still appropriate for these two waste streams. CWM also has indicated that the high concentration selenium wastes from the treatability study are not strictly one-time generated wastes, but rather are representative of the wastes that the two facilities generate from time to time. Therefore, we are finalizing the alternative treatment standards for the two waste streams as proposed. Both CWM and the commenter support our decision to finalize this variance at this time.

We note that, since this rule is approving a variance from a numerical treatment standard, CWM may use any reagent it chooses in meeting the alternative numerical standard. Finalization of this rule does not preclude CWM from using the commenter's reagent in stabilizing the two waste streams, which may be needed for any batches of higher selenium concentrations. The Agency notes that, to avoid questions of impermissible dilution, CWM will need to keep the reagent to waste ratios within acceptable bounds. No specific ratios are being established in today's rule because the Agency does not typically circumscribe a treater's flexibility in this manner. However, the Agency recommends that CWM use a reagent to waste ratio of 2.7 to 1 as a benchmark. This is the ratio used by the Agency in establishing today's alternative treatment standard.

IV. Reasons for the 3-Year Limitation

Because selenium is a non-renewable resource, and because the wastes in question contain high selenium concentrations, one potential avenue is that the selenium component could be recycled in an environmentally sound manner instead of being stabilized and landfilled. No secondary selenium recovery capacity currently exists in the

U.S.² Further, the market for selenium appears to be declining, selenium prices are low, and a surplus foreign secondary capacity of selenium exists.³ All of these factors suggest that development of an environmentally protective secondary selenium recovery system in the U.S. is not reasonably to be expected in the near future. That leaves stabilization as the best available treatment technology.

Over the next three years, EPA will determine whether this is still the case, and also whether new technologies (e.g., more effective stabilization reagents) have become available to treat these wastes to the national treatment level of 5.7 mg/L TCLP. CWM should expect to update us annually on the alternative treatment technologies it is investigating, and to submit any analytical data from studies using these alternative technologies. We will ask that CWM's submission also include information showing which stabilization recipe it is using to meet the alternative treatment standards, the selenium concentrations in untreated wastes, and the analytical results from these treated wastes. The Agency intends to use this information to determine if today's alternative treatment standards (or some other levels) are appropriate as a more permanent standard. Timely submittal of this information will allow us to begin any necessary rulemaking process as early as possible.

At the end of the three-year period, today's alternative treatment standards expire. Thus, if CWM has not found a new treatment technology to treat the two wastes to the national treatment level for D010 selenium wastes or if the Agency has not adopted more permanent alternative treatment standards for these two wastes, then CWM will have to submit a new petition to the Agency for a continuation of the current treatment variance, or a new treatment variance if a different alternative treatment standard is warranted.

V. Administrative Requirements

A. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) have an annual effect on the economy of \$100

² "Recycling-Metals." U.S. Geological Survey—Minerals Information—1997.

³ *Id.*

million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Because this rule does not create any new regulatory requirements, it is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review. Also, because this variance only changes the treatment standards applicable to two D010 waste streams at the Chemical Waste Management, Inc. facility in Kettleman City, California, and does not change in any way the paperwork requirements already applicable to these wastes, it does not affect requirements under the Paperwork Reduction Act.

B. Executive Order 12875

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates. Today's rule does not create a mandate on state, local, or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule.

C. Executive Order 13045

"Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

Today's final rule is not subject to E.O. 13045 because it does not meet either of these criteria. The wastes described in this treatment variance will be treated by Chemical Waste Management, Inc., and then disposed of in a RCRA Subtitle C landfill, ensuring that there will be no risks that may disproportionately affect children.

D. Executive Order 13084

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities." Today's final rule does not significantly or uniquely affect the communities of Indian tribal governments. This rule issues a variance from the LDR treatment standards for two specific characteristic selenium wastes. Accordingly, the requirements

of section 3(b) of Executive Order 13084 do not apply to this rule.

E. Executive Order 12898

EPA is committed to addressing environmental justice concerns and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all residents of the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income bears disproportionately high and adverse human health and environmental impacts as a result of EPA's policies, programs, and activities, and that all people live in clean and sustainable communities. In response to Executive Order 12898 and to concerns voiced by many groups outside the Agency, EPA's Office of Solid Waste and Emergency Response formed an Environmental Justice Task Force to analyze the array of environmental justice issues specific to waste programs and to develop an overall strategy to identify and address these issues (OSWER Directive No. 9200.3-17). Today's variance applies to two D010 waste streams that will be treated by Chemical Waste Management, Inc. at their Kettleman City, California facility and disposed of in a RCRA Subtitle C landfill, ensuring protection to human health and the environment. Therefore, the Agency does not believe that today's rule will result in any disproportionately negative impacts on minority or low-income communities relative to affluent or non-minority communities.

F. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with

applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local, or tribal governments or the private sector, and it does not impose any Federal mandate on State, local, or tribal governments or the private sector within the meaning of the Unfunded Mandates Reform Act of 1995. This rule also does not create new regulatory requirements; rather, it merely establishes alternative treatment standards for specific wastes that replace standards already in effect. EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA. For the same reasons, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments.

G. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of

1996) whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities.

This treatment variance does not create any new regulatory requirements. Rather, it establishes alternative treatment standards for two specific wastes that replace standards already in effect, and it only applies to the CWM facility in Kettleman City, California. Therefore, I hereby certify that this rule will not have a significant economic impact on a substantial number of small entities. This rule, therefore, does not require a regulatory flexibility analysis.

H. National Technology Transfer and Advancement Act of 1995

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This action does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small

Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules: (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S.C. 804(3). EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability, applying only to a particular waste at one facility under particular (and, as noted, exceptional) circumstances.

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: May 11, 1999.

James R. Berlow,
Acting Director, Office of Solid Waste.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 268—LAND DISPOSAL RESTRICTIONS

1. The authority citation for part 268 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

2. Section 268.44 is amended by adding two entries in alphabetical order and three footnotes to "TABLE—WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40" in paragraph (o) to read as follows:

§ 268.44 Variance from a treatment standard.

* * * * *

(o) * * *

WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40

Facility name ¹ and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/L TCLP)	Notes	Concentration (mg/L TCLP)	Notes
Ball-Foster Glass Container Corporation, El Monte, CA ^{(6),(7)} .	D010	Table CCWE in 268.40.	Selenium	NA	NA	25	NA

WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40—Continued

Facility name ¹ and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/L TCLP)	Notes	Concentration (mg/L TCLP)	Notes
Owens Brockway Glass Container Company, Vernon, CA ^{(5),(7)} .	D010	Table CCWE in 268.40.	Selenium	NA	NA	51	NA

(1) A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

(5) Alternative D010 selenium standard only applies to dry scrubber solid from glass manufacturing wastes.

(6) Alternative D010 selenium standard only applies to electrostatic precipitator dust generated during glass manufacturing operations.

(7) D010 wastes generated by these two facilities are subject to the following conditions: (a) the wastes must be treated by Chemical Waste Management, Inc. at their Kettleman Hills facility in Kettleman City, California; and (b) this treatment variance will be valid until May 11, 2002.

NOTE: NA means Not Applicable.

[FR Doc. 99-12945 Filed 5-25-99; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AF62

Endangered and Threatened Wildlife and Plants; Threatened Status for Johnson's Seagrass

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Fish and Wildlife Service (Service) is adding Johnson's seagrass (*Halophila johnsonii*) to the List of Endangered and Threatened Plants (List) as a threatened species in accordance with the Endangered Species Act of 1973, as amended (Act). This amendment to the List is based on a determination by the National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, Department of Commerce, which has jurisdiction for this species, published on September 14, 1998, in the *Federal Register* (63 FR 49035).

DATES: The effective date of this action is May 26, 1999.

FOR FURTHER INFORMATION CONTACT: Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, 4401 N.

Fairfax Drive, Mail Stop 452, Arlington, Virginia 22203 (703/358-2171).

SUPPLEMENTARY INFORMATION: The Act is administered jointly by the Service and NMFS. In accordance with a Memorandum of Understanding between the Service and NMFS regarding jurisdictional responsibilities and listing procedures under the Act signed on August 28, 1974, the agencies agreed that NMFS would assume jurisdiction for the Johnson's seagrass. Under section 4(a)(2) of the Act, NMFS must decide whether a species under its jurisdiction should be classified as endangered or threatened. The Service is responsible for the actual amendment of the List in 50 CFR 17.12(h).

NMFS published a proposed rule to list Johnson's seagrass as a threatened species on September 15, 1993 (58 FR 48326). In the proposed rule, NMFS solicited comments from peer reviewers, the public, and all other interested parties. NMFS held a public hearing on the proposed listing in Vero Beach, Florida, on September 20, 1994. NMFS reopened the comment period for the proposed listing on April 20, 1998 (63 FR 19468).

On September 14, 1998, NMFS published a final rule to list Johnson's seagrass as threatened (63 FR 49035). In the final rule, NMFS addressed the comments received in response to the proposed rule. Because NMFS provided public comment periods on the proposed rule, and because this action of the Service to amend the List in accordance with the determination by NMFS is nondiscretionary and

administrative in nature, the Service has omitted the notice and public comment procedures of 5 U.S.C. 553(b) for this action.

National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Export, Import, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, the Service amends part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. The Service amends section 17.12(h) by adding the following, in alphabetical order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants:

Species		Historic range	Family name	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
<i>Halophila johnsonii</i>	Johnson's seagrass	U.S.A. (FL)	Hydrocharitaceae ...	T	663	NA	NA

FLOWERING PLANTS

26

revisions listed in paragraphs (c)(172)(i)(B) and (C) of this section.

[FR Doc. 02-13110 Filed 5-24-02; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[FRL-7217-4]

Land Disposal Restrictions: Site-Specific Treatment Variance to Chemical Waste Management, Inc.

AGENCY: Environmental Protection Agency.

ACTION: Direct final rule.

SUMMARY: The United States Environmental Protection Agency (EPA or Agency) is today taking direct final action by granting a site-specific treatment variance from the Land Disposal Restrictions (LDR) treatment standards for two selenium-bearing hazardous wastes. EPA first granted a variance for these two waste streams three years ago. We are now taking action to extend the variance because: the chemical properties of these two wastes continue to differ significantly from the waste used to establish the current LDR standard for selenium (5.7 mg/L, as measured by the TCLP); and Chemical Waste Management, Inc. (CWM) has adequately demonstrated that the two wastes cannot be treated with current technologies to meet this treatment standard.

CWM will stabilize these two specific wastes at their Kettleman City, California facility to meet the following alternative treatment standards: 51 mg/L, as measured by the TCLP, for the Owens-Brockway waste and 25 mg/L, as measured by the TCLP, for the St. Gobain (formerly Ball Foster) waste. After treatment to these alternative selenium standards, CWM may dispose of the treated wastes in a RCRA Subtitle C landfill provided they meet the applicable LDR treatment standards for the other hazardous constituents in the wastes. We are granting this variance for three years.

DATES: This rule is effective on July 12, 2002, without further notice, unless EPA receives adverse comment on the direct final rule by June 27, 2002. If we receive such comment, we will publish a timely withdrawal in the *Federal Register* informing the public that this rule will not take effect.

ADDRESSES: The official record for this rulemaking is identified as Docket Number F-2002-CWVF-FFFFF and is

located in the RCRA Docket Information Center (RIC), Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA 22202. The RIC is open from 9 am to 4 pm Monday through Friday, excluding federal holidays. To review docket materials, we recommend that you make an appointment by calling 703-603-9230. You may copy up to 100 pages from any regulatory document at no charge. Additional copies cost \$0.15 per page.

FOR FURTHER INFORMATION CONTACT: For general information, call the RCRA Call Center at 1-800-424-9346 or TDD 1-800-553-7672 (hearing impaired). Callers within the Washington Metropolitan Area must dial 703-412-9810 or TDD 703-412-3323 (hearing impaired). The RCRA Call Center is open Monday-Friday, 9 am to 4 pm, Eastern Standard Time. For more information on specific aspects of this direct final rule, contact Josh Lewis at 703-308-7877, lewis.josh@epa.gov, or write him at the Office of Solid Waste, 5302W, U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

SUPPLEMENTARY INFORMATION: EPA is publishing this rule without prior proposal because we view it as a noncontroversial action. We anticipate no significant adverse comment because of the site-specific nature of this action and because we are merely extending a variance that is already in effect, and which has already been the subject of notice and opportunity for comment. In the three years since we granted the original variance, no new treatment options have become available to treat these two waste streams more effectively. Having said this, in the "Proposed Rules" section of today's *Federal Register* publication, we are publishing a separate document that will serve as the proposal to grant this variance if significant adverse comments are filed. See the proposed rule for information on submitting comments.

This direct final rule will be effective on July 12, 2002, without further notice unless we receive adverse comment by June 27, 2002. If we receive significant adverse comment, we will publish a timely withdrawal in the *Federal Register* indicating that this direct final rule action is being withdrawn due to adverse comment on the proposed rule. We will then address all public comments, as appropriate, based on the proposed rule. Any parties interested in commenting on this treatment variance must do so at this time.

Availability of Rule on Internet

Please follow these instructions to access the rule: From the World Wide Web (WWW), type <http://www.epa.gov/epaoswer/hazwaste/ldr>.

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I. Background

A. What Is the Basis for LDR Treatment Variances?

Under section 3004(m) of the Resource Conservation and Recovery Act (RCRA), EPA is required to set "levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." EPA interprets this language to authorize treatment standards based on the performance of best demonstrated available technology (BDAT). This interpretation was upheld by the D.C. Circuit in *Hazardous Waste Treatment Council vs. EPA*, 886 F. 2d 355 (D.C. Cir. 1989).

The Agency recognizes that there may be wastes that cannot be treated to levels specified in the regulations (see 40 CFR 268.40) because an individual waste matrix or concentration can be

substantially more difficult to treat than those wastes the Agency evaluated in establishing the treatment standard (51 FR 40576, November 7, 1986). For such wastes, EPA has a process by which a generator or treater may seek a treatment variance. See 40 CFR 268.44. If granted, the terms of the variance establish an alternative treatment standard for the particular waste at issue.

B. What Is the Basis of the Current Selenium Treatment Standard?

In the so-called Third Third rule (55 FR 22521, June 1, 1990), we used performance data from the stabilization of a selenium D010 mineral processing waste, which we determined to be the most difficult to treat selenium waste, to set the national treatment standard for selenium. This waste contained up to 700 ppm total selenium and 3.74 mg/L selenium in the TCLP leachate. The resulting post-treatment selenium TCLP levels were between 1.80 and 0.154 mg/L, which led to our establishment of a national treatment standard of 5.7 mg/L for D010 selenium nonwastewaters. At that time, EPA also had information indicating that wastes containing high concentrations of selenium are rarely generated and land disposed and, therefore, concluded that the standard of 5.7 mg/L was achievable.

In the Phase IV final rule, the Agency determined that a treatment standard of 5.7 mg/L, as measured by the TCLP, continued to be appropriate for D010 nonwastewaters (63 FR 28556, May 26, 1998). The Agency also changed the universal treatment standard (UTS) for selenium nonwastewaters from 0.16 mg/L to 5.7 mg/L. In the preamble to the Phase IV final rule, we noted that we received comments from one company, Chemical Waste Management (CWM), indicating that they were attempting to stabilize selenium wastes with concentrations much higher than those EPA was examining to establish the national selenium standard. In response, we indicated that for these high-level selenium waste streams, we would propose a site-specific treatment variance.

II. Basis for Today's Determination

A. What Is the History of This Variance?

As we just mentioned, in the preamble to the Phase IV rule we said we would propose a site-specific treatment variance for high selenium waste streams. We proposed this treatment variance on October 23, 1998 (63 FR 56886) and subsequently finalized it in a May 26, 1999 Federal Register notice (64 FR 28387). The variance was for a three-year period

from the date of signature (i.e., May 11, 1999) and it covered two specific waste streams: An electrostatic precipitator dust from Owens Brockway; and a dry scrubber solid from Ball Foster (now St. Gobain). Both waste streams contain relatively high leachable selenium concentrations. As we mentioned in the original treatment variance, CWM presented data showing that selenium TCLP concentrations in the untreated wastes are one to three orders of magnitude higher than the untreated mineral processing wastes that EPA used to develop the current D010 selenium treatment standard.¹ The data also showed that neither treated waste stream can reliably meet the numerical standard of 5.7 mg/L, as measured by the TCLP, even though CWM shows that they were using the treatment technology on which EPA based the selenium treatment standard.²

In the May 26, 1999 Federal Register notice, we established the following alternative treatment standards for selenium: 51 mg/L TCLP for Owens Brockway; and 25 mg/L TCLP for Ball Foster (now St. Gobain). We also included a requirement that CWM submit to EPA an annual report containing any analytical data from studies using alternative treatment technologies, data showing the stabilization recipes they are using to meet the alternative treatment standards, and the untreated and treated selenium concentrations in these wastes.

On June 8, 2000 and May 7, 2001, CWM submitted, respectively, the first and second annual reports to the Agency.³ On March 25, 2002, CWM submitted a letter to EPA requesting a continuation of the treatment variance for another three-year period. In the letter, CWM states that because both wastes continue to have elevated levels of leachable selenium, they are unable to achieve the selenium treatment standard consistently. CWM also asserts that they are unaware of any additional reagents that would be more effective in the treatment process.

¹ Selenium concentrations in the untreated Owens Brockway wastes were between 465 and 1024 mg/L, as measured by the TCLP, while the selenium concentration in the Ball-Foster waste was 59.8 mg/L, as measured by the TCLP.

² CWM submitted stabilization data from each facility using combinations of the following stabilization reagents: ferrous sulfate, calcium polysulfide, ferric chloride, sodium bisulfate, portland cement, and cement kiln dust. For more detailed information about the original petition, see the docket supporting this rulemaking (docket number F-2002-CWVF-FFFFF).

³ All three CWM's annual reports are in the docket supporting today's rulemaking.

B. What Criteria Govern a Treatment Variance?

Under 40 CFR 268.44 (h), EPA allows facilities to apply for a site-specific variance when a waste generated under conditions specific to only one site cannot be treated to the specified level(s). In such cases, the generator or treatment facility may apply to the Administrator, or EPA's delegated representative, for a site-specific variance from a treatment standard.

In 40 CFR 268.44 (h)(1) and (2), EPA describes the two main cases in which we will grant a treatment variance. The case described in 40 CFR 268.44 (h)(1) is applicable to this treatment variance, which addresses process wastes that are generated on a routine basis by two glass manufacturing companies. Basically, EPA must determine if the petitioner has adequately shown that, "It is not physically possible to treat the waste to the level specified in the treatment standard * * * because the physical or the chemical properties of the waste differ significantly from the waste analyzed in developing the treatment standard. * * *"

C. What Is the Basis for EPA's Approval of CWM's Request for an Alternative D010 Treatment Standard?

After careful review of the original treatment variance and of the data that CWM has submitted since we granted the original treatment variance, we conclude that CWM has adequately demonstrated that the wastes continue to satisfy the requirements for a treatment variance under 40 CFR 268.44 (h)(1).

The two glass manufacturing waste streams continue to differ significantly in chemical composition from the waste used to generate the original selenium treatment standard. Selenium TCLP concentrations in the untreated wastes continue to be one to three orders of magnitude higher than the concentrations in the waste used in developing the treatment standard for D010 hazardous wastes. Furthermore, CWM continues to use stabilization as the treatment technology, which is consistent with EPA's determination of BDAT, and the process is well-designed and operated.⁴

As we mentioned in the preamble to the original treatment variance, treatment of these two wastes is especially difficult because of the presence of other metals (i.e., arsenic, cadmium, chromium, and lead) above their respective characteristic levels. It

⁴ See the docket supporting today's rule for more detailed information on CWM's standard practices for land disposal restricted waste.

is difficult, if not impossible, to optimize treatment for selenium when other metals are being treated because the selenium solubility curve differs from that of most other metals.⁵

Therefore, EPA is today granting an extension to the site-specific treatment variance from the D010 treatment standards for the two waste streams in question since the wastes cannot be physically treated to the level specified in the regulations. Today's alternative treatment standards will provide sufficient latitude for CWM to treat the other metals present in the wastes to LDR treatment standards and, by raising the selenium treatment standard, will avoid the difficulty posed by the different metal solubility curves.

D. What Are the Terms and Conditions of the Variance?

This variance applies to the following two waste streams that are generated during glass manufacturing operations: electrostatic precipitator dust from Owens Brockway Glass Container Company; and dry scrubber solid from St. Gobain (formerly Ball Foster).

1. Determination of the Treatment Standard for the Owens Brockway Waste

When we originally set the alternative treatment standard for the Owens Brockway waste, we determined the most effective stabilization recipe consisted of 0.7 parts iron sulfate combined with 2.0 parts cement, resulting in a reagent to waste ratio of 2.7 to 1. This recipe achieved final selenium TCLP values of 36.8, 34.08, and 43.7 mg/L.⁶ We then used the BDAT methodology⁷ to calculate an alternative D010 standard of 51 mg/L, as measured by the TCLP.

In the approximately three years the treatment variance has been in effect, CWM has treated 26 batches of the Owens Brockway waste. Untreated selenium TCLP values ranged from 26.5–649 mg/L, with an average value of about 265 mg/L. Treated TCLP values range from non-detect to 32.6 mg/L, with an average value of about 12.5

mg/L. Because the TCLP values in the untreated and treated wastes are comparable to the levels in the wastes we used to set the original alternative treatment standard of 51 mg/L, we determined that a TCLP value of 51 mg/L continues to be the appropriate alternative treatment standard for this waste.

2. Determination of the Treatment Standard for the St. Gobain Waste

When we originally set the alternative selenium treatment standard for the Ball-Foster waste, we determined the most effective stabilization recipes have reagent to waste ratios of 1.8, 2.2, 2.3, 2.4, and 2.7. Selenium concentrations in the treated wastes were 11.6, 7.47, 8.22, 15.6, and 4.82 mg/L, as measured by the TCLP.⁸ Using these five data points, we calculated an alternative treatment D010 standard of 25 mg/L, as measured by the TCLP.

In the approximately three years the treatment variance has been in place, CWM has treated seven batches of the Owens Brockway waste. Untreated selenium TCLP values ranged from 33.5–43.9 mg/L, with an average value of about 38.9 mg/L. Treated TCLP values range from 1.6 to 14.6 mg/L, with an average value of about 8.7 mg/L. Because the TCLP values in the untreated and treated wastes are comparable to the levels in the wastes we used to set the original alternative treatment standard of 25 mg/L, we determined that a TCLP value of 25 mg/L continues to be the appropriate alternative treatment standard for this waste.

3. Specifics Applicable to Both Waste Streams

After treatment to these alternative selenium standards, CWM may dispose of the treated wastes in a RCRA Subtitle C landfill⁹ provided CWM complies with any other applicable treatment standards associated with these wastes, including other applicable Federal, State, or local requirements as specified in the facility's waste analysis plan. We are granting this variance for three years for reasons discussed in section IV below.

⁸ The treatment extract pH ranged from 11.9–12.0, which again suggested that the use of the TCLP adequately reflected the worst case disposal scenario. Furthermore, these treatment recipes were all consistent with the reagent to waste ratios used to establish the existing selenium standard of 5.7 mg/L, as measured by the TCLP.

⁹ Note that disposal in a Subtitle C landfill is required because the treated wastes are still characteristic for selenium (i.e., the wastes have TCLP values above the toxicity characteristic level for selenium of 1.0 mg/L).

4. Summary

In summary, after evaluating the data from the three years that the treatment variance has been in place, we have determined that the conditions that were present when we originally granted this treatment variance still exist: the two glass manufacturers continue to produce these high selenium waste streams; the untreated and treated selenium concentrations continue to be one to three orders of magnitude higher than the wastes we used to set the original selenium treatment standard; and alternative treatment options have not been established to more effectively treat these wastes.

We also note that although the alternative selenium standards for these two wastes are relatively high, this treatment variance is a technically necessary compromise. As noted above and in the May 12, 1997 *Federal Register* (62 FR 26045), treatment cannot be optimized for both acid and base-soluble metals due to their different solubility curves. Because all of the other toxic metals (i.e., arsenic, cadmium, chromium, and lead) are being immobilized to meet their respective universal treatment standards, we consider, under the circumstances, that threats are being minimized if the alternative selenium treatment standards are met, as required by 3004 (m).

Furthermore, not only are all of the other toxic metals meeting their respective UTS standards, but the alternative selenium treatment standards essentially require CWM to use a well-designed and well-operated treatment system that is consistent, particularly in terms of the selection of reagents and reagent to waste ratios, with the technical basis for the current selenium treatment standard.

III. Reasons for Imposing Another Three-Year Limitation

We are granting this treatment variance for another three-year period. Again, we believe the conditions that led us to set the original three-year limit still exist. To be more specific, because selenium is a non-renewable resource, and because the wastes in question contain high selenium concentrations, one potential avenue that we want to continue to explore is whether the selenium component could be recycled in an environmentally sound manner instead of being stabilized and landfilled.¹⁰ Over the next three years,

¹⁰ In 2001, Hydromet Environmental Recovery Ltd. opened the first plant in the U.S. that recovers

we also intend to work with the two glass manufacturers to better understand the processes that generate these waste streams and to explore whether opportunities exist to reduce the amount of selenium that ultimately is disposed.

For the three-year period, we expect CWM to update us annually on the alternative treatment technologies they are investigating and to submit any analytical data from studies using these alternative technologies. We ask that CWM's submission also include information showing which stabilization recipe they are using to meet the alternative treatment standards, the selenium concentrations in untreated wastes, and the analytical results from these treated wastes. We intend to use this information to determine, among other things, if there are any reductions in the amount of selenium that ultimately is disposed and if the alternative treatment standards for selenium are appropriate as a more permanent standard for these wastes.

At the end of the three-year period, today's alternative treatment standards expire. Thus, if the two glass manufacturers continue to generate these wastes with commensurate selenium levels, and if CWM has not found a new treatment technology to treat the two wastes to the national treatment level for D010 selenium wastes (or if the Agency has not adopted more permanent alternative treatment standards for these two wastes), then CWM and/or the generators of the two waste streams will have to re-open discussions with EPA about the most appropriate course of action for future management of these waste streams.

IV. Administrative Requirements

A. Regulatory Impact Analysis Pursuant to Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal

governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Because this rule does not create any new regulatory requirements, it is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

B. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

This treatment variance does not create any new regulatory requirements. Rather, it establishes alternative treatment standards for two specific wastes that replace standards already in effect, and it only applies to the CWM facility in Kettleman City, California. Therefore, I hereby certify that this rule will not have a significant economic impact on a substantial number of small entities. This rule, therefore, does not require a regulatory flexibility analysis.

C. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under Section 202 of the UMRA, EPA generally must prepare a written statement, including a cost benefit

analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. If a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives. Under section 205, EPA must adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule, unless the Administrator publishes with the final rule an explanation why that alternative was not adopted. The provisions of section 205 do not apply when they are inconsistent with applicable law.

EPA has determined that this rule does not include a Federal mandate that may result in estimated costs of \$100 million or more in the aggregate to either State, local, or tribal governments or the private sector in one year. The rule would not impose any Federal intergovernmental mandate because it imposes no enforceable duty upon State, tribal or local governments. States, tribes, and local governments would have no compliance costs under this rule. EPA has also determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. In addition, as discussed above, the private sector is not expected to incur costs exceeding \$100 million. EPA has fulfilled the requirement for analysis under the Unfunded Mandates Reform Act. Thus, today's rule is not subject to the requirements of sections 202, 204 and 205 of UMRA.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule will not significantly or uniquely affect small governments. This rule will not impose any requirements on small entities. This treatment variance does not create any new regulatory requirements. Rather, it establishes alternative treatment standards for two specific wastes that replace standards already in effect. Today's rule is not, therefore, subject to

selenium from waste materials. The plant processes selenium materials from the copper refining and photocopy industries. These materials contain 25% or greater selenium.

the requirements of section 203 of UMRA.

D. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

"Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

Today's rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. The subject wastes will comply with all other treatment standards and be disposed of in RCRA Subtitle C landfills. Therefore, we have identified no risks that may disproportionately affect children.

E. Environmental Justice Executive Order 12898

EPA is committed to addressing environmental justice concerns and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all residents of the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income bears disproportionately high and adverse human health and environmental impacts as a result of EPA's policies, programs, and activities, and that all people live in clean and sustainable communities. In response to Executive Order 12898 and to concerns voiced by many groups outside the Agency, EPA's Office of Solid Waste and Emergency Response formed an Environmental Justice Task Force to analyze the array of environmental justice issues specific to waste programs and to develop an overall strategy to identify and address these issues (OSWER Directive No. 9200.3-17).

Today's variance applies to two D010 waste streams that will be treated by Chemical Waste Management, Inc. at

their Kettleman City, California facility and disposed of in a RCRA Subtitle C landfill, ensuring protection to human health and the environment. Therefore, the Agency does not believe that today's rule will result in any disproportionately negative impacts on minority or low-income communities relative to affluent or non-minority communities.

F. Paperwork Reduction Act

This variance only changes the treatment standards applicable to two D010 waste streams at the Chemical Waste Management, Inc. facility in Kettleman City, California. It does not change in any way the paperwork requirements already applicable to these wastes. Therefore, this rule is not affected by the requirements of the Paperwork Reduction Act.

G. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113, Section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards based on new methodologies. Therefore, EPA did not consider the use of any voluntary consensus standards.

H. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and

responsibilities between the Federal government and Indian tribes."

This rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. This treatment variance does not create any new regulatory requirements. Rather, it establishes alternative treatment standards for two specific wastes that replace standards already in effect. Thus, Executive Order 13175 does not apply to this rule.

I. Executive Order 13132 (Federalism)

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of governments."

This rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This treatment variance does not create any new regulatory requirements. Rather, it establishes alternative treatment standards for two specific wastes that replace standards already in effect. Thus, Executive Order 13132 does not apply to this rule.

J. Executive Order 13211 (Energy Effects)

This rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy effects.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A Major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as

defined by 5 U.S.C. 804(2). This rule will be effective July 12, 2002.

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: May 13, 2002.

Michael H. Shapiro,
Deputy Assistant Administrator, Office of
Solid Waste and Emergency Response.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 268—LAND DISPOSAL RESTRICTIONS

1. The authority citation for part 268 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

2. In § 268.44, the table in paragraph (o) is amended by: a. Removing the entry for "Ball Foster Glass Container Corp, El Monte, CA";

b. Adding in alphabetical order a new entry for "St. Gobain Containers, El Monte, CA"; and

c. Revising footnote 7.

The revision and addition read as follows:

§ 268.44 Variance from a treatment standard.

* * * * *

(o) * * *

TABLE—WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40

Facility name ⁽¹⁾ and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/L)	Notes	Concentration (mg/kg)	Notes
St. Gobain Containers, El Monte, CA ⁽⁶⁾ ⁽⁷⁾ .	D010	Standards under § 268.40.	Selenium	NA	NA	25	NA

⁽¹⁾ A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

⁽⁶⁾ Alternative D010 selenium standard only applies to dry scrubber solid from glass manufacturing wastes.

⁽⁷⁾ D010 wastes generated by these two facilities are subject to the following conditions: (a) the wastes must be treated by Chemical Waste Management, Inc. at their Kettleman Hills facility in Kettleman City, California; and (b) this treatment variance will be valid until July 12, 2005.

Note: NA means Not Applicable.

[FR Doc. 02-13114 Filed 5-24-02; 8:45 am]
BILLING CODE 6560-50-P

FEDERAL COMMUNICATIONS COMMISSION**47 CFR Part 1**

[DA 02-494]

FCC Registration Number Rules

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: On August 31, 2001 the Commission released final rules amending its rules to require persons and entities doing business with the Commission to obtain a unique identifying number called the FCC Registration Number (FRN) and to supply it when doing business with the Commission. The Commission is revising those rules to correct nonsubstantive errors.

DATES: Effective May 28, 2002.

FOR FURTHER INFORMATION CONTACT:
Laurence H. Schecker, Office of General Counsel (202) 418-1720.

SUPPLEMENTARY INFORMATION: This order adopted February 29, 2000 revises 47 CFR 1.8002 and 1.8004 to make nonsubstantive, editorial revisions. The Commission's rules are amended as set forth:

Ordering Clause

According, pursuant to § 0.231(b) of the Commission's rules, 47 CFR 0.231(b), that sections 1.8002(b)(1), 1.8004(c), and 1.8004(d) of the Commission's rules, 47 CFR 1.8002(b)(1), 1.8004(c), and 1.8004(d), are AMENDED as set forth in the rule changes.

List of Subjects in 47 CFR Part 1

Practice and procedure.

Federal Communication Commission.
Marlene H. Dortch,
Secretary.

Rule Changes

For the reasons discussed in the preamble, the Federal Communications

Commission amends 47 CFR Part 1 as follows:

PART 1—PRACTICE AND PROCEDURE

1. The authority citation for part 1 continues to read as follows:

Authority: 47 U.S.C. 151, 154(i), 154(j), 155, 225, 303(r), 309 and 325(e).

§ 1.8002 [Amended].

2. In § 1.8002(b)(1), remove the words "THE CORES" and add in their place the words "the CORES".

3. Revise § 1.8004(c) and (d) to read as follows:

§ 1.8004 Penalty for Failure to Provide the FRN.

* * * * *

(c) Where the Commission has not established a filing deadline for an application, a missing or invalid FRN on such an application may be corrected and the application resubmitted. Except as provided in paragraph (d) of this section or in other Commission rules, the date that the resubmitted application is received by the

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959-1963 Comp., p. 389.

§ 71.1 [Amended]

2. The incorporation by reference in 14 CFR 71.1 of the Federal Aviation Administration Order 7400.9], Airspace Designations and Reporting Points, dated August 31, 2001, and effective September 16, 2001, is amended as follows:

* * * * *

Paragraph 6005 Class E airspace areas extending upward from 700 feet or more above the surface of the earth.

* * * * *

AGL MI E5 Lapeer, MI [Revised]

Dupont-Lapeer Airport, MI
(Lat. 43°04'00"N., long. 83°16'20"W.)

That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of the Dupont-Lapeer Airport.

* * * * *

Issued in Des Plaines, Illinois on April 22, 2002.

Nancy B. Shelton,
Manager, Air Traffic Division, Great Lakes Region.

[FR Doc. 02-13216 Filed 5-24-02; 8:45 am]

BILLING CODE 4910-13-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[MD132 & MD133-3087b; FRL-7210-2]

Approval and Promulgation of Air Quality Implementation Plans; State of Maryland; Revised Definitions and Recordkeeping Provisions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA proposes to approve State Implementation Plan (SIP) revisions submitted by the State of Maryland. The revisions adopt by reference the EPA definition of volatile organic compounds (VOC), update the Federal citation of the prevention of significant deterioration (PSD) requirements references in Maryland's definitions and general emission standards provisions, and revise the general records and information requirements for installations and sources. In the Rules and Regulations section of this *Federal Register*, EPA is approving these revisions to the State of Maryland's SIP as a direct final rule in accordance with the requirements of the Clean Air Act. If EPA receives no

adverse comments on the direct final rule, EPA will not take further action. If EPA receives adverse comments on the direct final rule, EPA will withdraw the direct final rule and it will not take effect. EPA will address all public comments in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period on this action. Any parties interested in commenting on this action should do so at this time.

DATES: Comments must be received in writing by June 27, 2002.

ADDRESSES: Written comments should be addressed to Harold A. Frankford, Office of Air Programs, Mailcode 3AP20, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the documents relevant to this action are available for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103; and the Maryland Department of the Environment, 2500 Broening Highway, Baltimore, Maryland, 21224.

FOR FURTHER INFORMATION CONTACT:

Harold A. Frankford at (215) 814-2108, or by e-mail at frankford.harold@epa.gov. Please note that while questions may be posed via telephone and e-mail, formal comments must be submitted in writing, as indicated in the **ADDRESSES** section of this document.

SUPPLEMENTARY INFORMATION: For further information, please see the information provided in the direct final action, with the same title, that is located in the "Rules and Regulations" section of this *Federal Register* publication. Please note that if EPA receives adverse comment on an amendment, paragraph, or section of the direct final rule and if that provision may be severed from the remainder of the direct final rule, EPA may adopt as final those provisions of the direct final rule that are not the subject of an adverse comment.

Dated: May 1, 2002.

Thomas C. Voltaggio,
Acting Regional Administrator, Region III.
[FR Doc. 02-13111 Filed 5-24-02; 8:45 am]
BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[FRL-7217-3]

Land Disposal Restrictions: Site-Specific Treatment Variance to Chemical Waste Management, Inc.

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The United States Environmental Protection Agency (EPA or Agency) is today proposing to grant a site-specific treatment variance from the Land Disposal Restrictions (LDR) treatment standards for two selenium-bearing hazardous wastes. EPA is proposing to grant this variance because: the chemical properties of these two wastes differ significantly from the waste used to establish the current LDR standard for selenium (5.7 mg/L, as measured by the TCLP); and Chemical Waste Management, Inc. (CWM) has adequately demonstrated that the two wastes cannot be treated to meet this treatment standard.

CWM intends to stabilize the wastes at their Kettleman City, California facility. If this proposal is finalized, CWM may treat these two specific wastes to alternate treatment standards of 51 mg/L, as measured by the TCLP, for the Owens-Brockway waste and 25 mg/L, as measured by the TCLP, for the St. Gobain waste. After treatment to these alternative selenium standards, CWM may dispose of the treated wastes in a RCRA Subtitle C landfill provided they meet the applicable LDR treatment standards for the other hazardous constituents in the wastes. We are proposing to grant this variance for three years.

In the "Rules and Regulations" section of the *Federal Register*, we are publishing a direct final rule that would grant this site-specific treatment variance without prior proposal because we view this action as noncontroversial and we anticipate no significant adverse comment. We have explained our reasons for this approach in the preamble to the direct final rule. If we receive significant adverse comment on the direct final rule, however, we will withdraw the direct final action and the treatment variance will not take effect. We will address all public comments, as appropriate, based on this proposed rule. We will not institute a second comment period on this action. Any parties interested in commenting on this proposed variance must do so at this time.

DATES: Written comments must be received by June 27, 2002.

ADDRESSES: If you wish to comment on this proposed rule, you must send an original and two copies of the comments referencing Docket Number F-2002-CWVP-FFFFF to: RCRA Information Center (RIC), Office of Solid Waste (5305G), U.S. Environmental Protection Agency Headquarters (EPA HQ), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460; or, if using special delivery, such as overnight express service: RIC, Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA 22202. You may also submit comments electronically following the directions in the **SUPPLEMENTARY INFORMATION** section below.

You may view public comments and supporting materials in the RIC. The RIC is open from 9 am to 4 pm Monday through Friday, excluding Federal holidays. To review docket materials, we recommend that you make an appointment by calling 703-603-9230. You may copy up to 100 pages from any regulatory document at no charge. Additional copies cost \$ 0.15 per page. For information on accessing an electronic copy of the data base, see the **SUPPLEMENTARY INFORMATION** section.

FOR FURTHER INFORMATION CONTACT: For general information, call the RCRA Call Center at 1-800-424-9346 or TDD 1-800-553-7672 (hearing impaired). Callers within the Washington Metropolitan Area must dial 703-412-9810 or TDD 703-412-3323 (hearing impaired). The RCRA Call Center is open Monday-Friday, 9 am to 4 pm, Eastern Standard Time. For more information on specific aspects of this proposed rule, contact Mr. Josh Lewis at 703-308-7877, lewis.josh@epa.gov, or write him at the Office of Solid Waste, 5302W, U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

SUPPLEMENTARY INFORMATION: This document concerns a site-specific treatment variance from the Land Disposal Restrictions (LDR) treatment standards for two selenium-bearing hazardous wastes to be treated by Chemical Waste Management, Inc. For further information, please see the information provided in the direct final action that is located in the "Rules and Regulations" section of this **Federal Register** publication.

Electronic Submittal of Comments

You may submit comments electronically by sending electronic mail through the Internet to: rcra-docket@epamail.epa.gov. You should

identify comments in electronic format with the docket number F-2001-CWVP-FFFFF. You must submit all electronic comments as an ASCII (text) file, avoiding the use of special characters or any type of encryption. The official record for this action will be kept in the paper form. Accordingly, we will transfer all comments received electronically into paper form and place them in the official record which will also include all comments submitted directly in writing. The official record is the paper record maintained at the RIC as described above. We may seek clarification of electronic comments that are garbled in transmission or during conversion to paper form. You should not electronically submit any confidential business information (CBI). You must submit an original and two copies of CBI under separate cover to: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

If you do not submit comments electronically, we are asking prospective commenters to voluntarily submit one additional copy of their comments on labeled personal computer diskettes in ASCII (text) format or a word processing format that can be converted to ASCII (text). It is essential that you specify on the disk label the word processing software and version/edition as well as the commenter's name. This will allow us to convert the comments into one of the word processing formats used by the Agency. Please use mailing envelopes designed to protect the diskettes. We emphasize that submission of diskettes is not mandatory, nor will it result in any advantage or disadvantage to any commenter.

I. Description of Proposed Rule

Today's notice proposes to continue for another three-year period a site-specific treatment variance for two selenium-bearing waste stream that will be treated by Chemical Waste Management, Inc. In the "Rules and Regulations" section of the **Federal Register**, we are issuing a direct final rule to grant this variance without prior proposal because we view this action as noncontroversial and anticipate no significant adverse comment. We have explained our reasons for this approach in the preamble to the direct final rule, and do not believe it necessary to repeat those discussions here. If we receive significant adverse comment on the direct final rule, we will withdraw the direct final action and the treatment variance will not take effect. We will address all public comments in a

subsequent final rule based on this proposed rule. We will not institute a second comment period on this action. Any parties interested in commenting on this proposed rule must do so at this time. For further information, please see the "Rules and Regulations" section of today's **Federal Register** publication.

II. How Can I Influence EPA's Thinking on This Rule?

In developing this rule, we tried to address the concerns of stakeholders. Your comments will help us improve this rule. We invite you to provide different views on options we propose, new approaches we have not considered, new data, how this rule may affect you, or other relevant information. We welcome your views on all aspects of this rule. Your comments will be most effective if you follow the suggestions below:

- Explain your views as clearly as possible and why you feel that way.
- Provide solid technical and cost data to support your views.
- If you estimate potential costs, explain how you arrived at the estimate.
- Tell us which parts you support, as well as those you disagree with.
- Provide specific examples to illustrate your concerns.
- Offer specific alternatives.
- Refer your comments to specific sections of the proposal, such as the units or page numbers of the preamble, or the regulatory sections.
- Make sure to submit your comments by the deadline in this notice.
- Be sure to include the name, date, and docket number with your comments.

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: May 13, 2002.

Michael H. Shapiro,
Deputy Assistant Administrator, Office of
Solid Waste and Emergency Response.
[FR Doc. 02-13115 Filed 5-24-02; 8:45 am]
BILLING CODE 6560-50-P

*LDR Treatability Variance Petition
Heritage Environmental Services, LLC
Indianapolis, Indiana
May 7, 2003*

Appendix B
Selenium Content of Raw Waste Samples

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8305	Received	Project	Lab ID
	07-MAR-03		H143745
	Complete	PO Number	
	10-MAR-03	480118437	
	Printed	Sampled	
	03-APR-03	07-MAR-03 08:00	

Report To	Bill To
CUSTOMER SERVICES REPRESENTATIVES HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET CUSTOMER SERVICE BUILDING INDIANAPOLIS, IN 46231-3301	WINDE HAMRICK HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231

Sample Description
CLIENT ID: 1183983 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT GENERATOR: GUARDAIN Submitter Code :2490

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A			
Analyst: R. REITZEL	Analysis Date: 07-MAR-03	Instrument: PREP	Test: P129.7.0
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

SELENIUM ICP SW846-6010B			NELAC: Y
Analyst: J. KRAMER	Analysis Date: 08-MAR-03 04:41	Instrument: ICP	Test: M128.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0			
Parameter	Result	Det. Limit	Units
SELENIUM	E 58000	5.0	mg/kg
DILUTION 1:5			

Sample Comments
<p>E Estimated. Exceeds calibration range</p> <p>Sample was not received on ice at temperature 19.8 C. Sample chain of custody number 121371.</p> <p>This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations. Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.</p>

Sample Comments

Arizona License Number AZ0627.

Additional copies of this report sent to:

TOM YURKOVIC, HERITAGE ENVIRONMENTAL SERVICES, LLC

7901 WEST MORRIS STREET PLANT 1, INDIANAPOLIS, IN 46231-3301

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8305	Received	Project	Lab ID
	07-MAR-03		H143746
	Complete	PO Number	
	10-MAR-03	480118437	
	Printed	Sampled	
	03-APR-03	06-MAR-03 08:00	

Report To	Bill To
CUSTOMER SERVICES REPRESENTATIVES HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET CUSTOMER SERVICE BUILDING INDIANAPOLIS, IN 46231-3301	WINDE HAMRICK HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231

Sample Description
CLIENT ID: 1183982 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT GENERATOR: GUARDIAN Submitter Code :2490

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A			
Analyst: R. REITZEL	Analysis Date: 07-MAR-03	Instrument: PREP	Test: P129.7.0
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

SELENIUM ICP SW846-6010B			NELAC: Y
Analyst: J. KRAMER	Analysis Date: 08-MAR-03 04:44	Instrument: ICP	Test: M128.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0			
Parameter	Result	Det. Limit	Units
SELENIUM	E 67000	5.0	mg/kg
DILUTION 1:5			

Sample Comments
<p>E Estimated. Exceeds calibration range</p> <p>Sample was not received on ice at temperature 19.8 C. Sample chain of custody number 121371.</p> <p>This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations. Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.</p>

Sample Comments

Arizona License Number AZ0627.

Additional copies of this report sent to:

TOM YURKOVIC, HERITAGE ENVIRONMENTAL SERVICES, LLC

7901 WEST MORRIS STREET PLANT 1, INDIANAPOLIS, IN 46231-3301

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8305	Received	Project	Lab ID
	07-MAR-03		H143747
	Complete	PO Number	
	10-MAR-03	480118437	
	Printed	Sampled	
	03-APR-03	06-MAR-03 08:00	

Report To	Bill To
CUSTOMER SERVICES REPRESENTATIVES HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET CUSTOMER SERVICE BUILDING INDIANAPOLIS, IN 46231-3301	WINDE HAMRICK HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231

Sample Description
CLIENT ID: 1184340 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT GENERATOR: GUARDIAN Submitter Code :2490

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A			
Analyst: R. REITZEL	Analysis Date: 07-MAR-03	Instrument: PREP	Test: P129.7.0
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

SELENIUM ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 08-MAR-03 04:48	Instrument: ICP	Test: M128.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0			
Parameter	Result	Det. Limit	Units
SELENIUM	E 63000	5.0	mg/kg
DILUTION 1:5			

Sample Comments
E Estimated. Exceeds calibration range Sample was not received on ice at temperature 19.8 C. Sample chain of custody number 121371. This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations. Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.

Sample Comments

Arizona License Number AZ0627.

Additional copies of this report sent to:

TOM YURKOVIC, HERITAGE ENVIRONMENTAL SERVICES, LLC

7901 WEST MORRIS STREET PLANT 1, INDIANAPOLIS, IN 46231-3301

Approved : P.K. Lewis

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8305	Received	Project	Lab ID
	08-MAR-03		H143748
	Complete	PO Number	
	10-MAR-03	VERBAL	
	Printed	Sampled	
	03-APR-03	07-MAR-03 09:45	

Report To CUSTOMER SERVICES REPRESENTATIVES HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET CUSTOMER SERVICE BUILDING INDIANAPOLIS, IN 46231-3301	Bill To WINDE HAMRICK HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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CLIENT ID: 1184103 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT SALESPERSON: . Submitter Code :2490	Sample Description
--	--------------------

SELENIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 10-MAR-03 08:15	Instrument: ICP	Test: M128.3.0
Parameter	Result	Det. Limit	Units
SELENIUM	E 60000	5.0	mg/kg
DILUTION 1:5			

ANALYSES PERFORMED COMPLY WITH THE HERITAGE WASTE ANALYSIS QUALITY ASSURANCE PLAN. REP 0 METALS ARE THE STABILIZATION METALS. FORMULATION WAS DONE AT THE PLANT. ICP RESULTS FROM 1:5 DILUTION E Estimated. Exceeds calibration range Sample was not received on ice at temperature 16.2 C. Sample chain of custody number 13954. This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations. Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401. Arizona License Number AZ0627.	Sample Comments
---	-----------------

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: H143748 1184103

Sample Comments

Additional copies of this report sent to:

TOM YURKOVIC, HERITAGE ENVIRONMENTAL SERVICES, LLC

7901 WEST MORRIS STREET PLANT 1, INDIANAPOLIS, IN 46231-3301

Approved :

R.C. Luce *RP*

Page 2 (last page)

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C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	Received	Project	Lab ID
	08-MAR-03		H143749
	Complete	PO Number	
	10-MAR-03	VERBAL	
	Printed	Sampled	
	03-APR-03	08-MAR-03 09:45	

Report To	Bill To
CUSTOMER SERVICES REPRESENTATIVES HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET CUSTOMER SERVICE BUILDING INDIANAPOLIS, IN 46231-3301	WINDE HAMRICK HERITAGE ENVIRONMENTAL SERVICES, LLC 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231

Sample Description
CLIENT ID: 1184104 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT SALESPERSON: . Submitter Code :2490

SELENIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 10-MAR-03 08:19	Instrument: ICP	Test: M128.3.0
Parameter	Result	Det. Limit	Units
SELENIUM	E 72000	5.0	mg/kg
DILUTION 1:5			

Sample Comments
ANALYSES PERFORMED COMPLY WITH THE HERITAGE WASTE ANALYSIS QUALITY ASSURANCE PLAN. REP 0 METALS ARE THE STABILIZATION METALS. FORMULATION WAS DONE AT THE PLANT. ICP RESULTS FROM 1:5 DILUTION E Estimated. Exceeds calibration range Sample was not received on ice at temperature 16.2 C. Sample chain of custody number 13954. This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations. Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401. Arizona License Number AZ0627.

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: H143749 1184104

Sample Comments

Additional copies of this report sent to:

TOM YURKOVIC, HERITAGE ENVIRONMENTAL SERVICES, LLC
7901 WEST MORRIS STREET PLANT 1, INDIANAPOLIS, IN 46231-3301

Approved: _____

P.R. Sence

*LDR Treatability Variance Petition
Heritage Environmental Services, LLC
Indianapolis, Indiana
May 7, 2003*

Appendix C
TCLP Data for Raw Waste Samples

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8304	Received 31-MAR-03	Project PO Number 04-APR-03 1	Lab ID A624098
	Complete 04-APR-03	Printed 07-APR-03	Sampled 06-MAR-03

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
---	---

Sample Description CLIENT ID: SAMPLE # 1183982 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: GUARDIAN Submitter Code :1147

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL	Analysis Date: 02-APR-03 10:00	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	12.2		Std. Units
ADJUSTED PH	12.1		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	11.8		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	24.0		Degrees C
INITIAL TIME	11512.3		Hours
FINAL TIME	11528.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH	Analysis Date: 03-APR-03 16:00	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.061	0.050	mg/L

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	5.0	0.050	mg/L

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	0.11	0.050	mg/L

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L

TCLP SELENIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M628.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units

Parameter	Result	Det. Limit	Units
SELENIUM	70.	0.050	mg/L

TCLP SILVER ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M630.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: D. THOMPSON Analysis Date: 03-APR-03 12:00 Instrument: PREP Test: P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A

NELAC:Y

Analyst: D. DRABENSTOTT Analysis Date: 04-APR-03 14:48 Instrument: CVAA Test: M620.4.0
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M602.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L

TCLP BERYLLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M605.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M634.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:41 Instrument: ICP Test: M638.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A624098 SAMPLE # 1183982

TCLP ZINC ICP SW846-6010B

NELAC

Analyst: J. KRAMER

Analysis Date: 04-APR-03 06:41

Instrument: ICP

Test: M639.8

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L

Sample Comments

1:5 Dilution on ICP.

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was not received on ice at temperature 22.1 C.
Sample chain of custody number 10945.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

Approved : P.R. Serna QAO

Page 4 (last page) 5

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8304	Received	Project	Lab ID
	31-MAR-03		A624099
	Complete	PO Number	
	07-APR-03	1	
	Printed	Sampled	
	08-APR-03	07-MAR-03	

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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CLIENT ID: SAMPLE # 1183983 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: GUARDIAN Submitter Code :1147	Sample Description
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TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL	Analysis Date: 02-APR-03 10:00	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	12.3		Std. Units
ADJUSTED PH	12.1		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	12.1		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	24.0		Degrees C
INITIAL TIME	11512.3		Hours
FINAL TIME	11528.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH	Analysis Date: 03-APR-03 16:00	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M603.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

TCLP BARIUM ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M604.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
BARIUM	0.082	0.050	mg/L

TCLP CADMIUM ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M608.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

TCLP CHROMIUM ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M610.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
CHROMIUM	3.9	0.050	mg/L

TCLP LEAD ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M616.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
LEAD	0.15	0.050	mg/L

TCLP NICKEL ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M622.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L

TCLP SELENIUM ICP SW846-6010B			
Analyst: J. KRAMER	Analysis Date: 04-APR-03 06:45	Instrument: ICP	NELAC:Y
Test: M628.8.0			
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
SELENIUM	72.	0.050	mg/L

TCLP SILVER ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:45 Instrument: ICP Test: M630.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: D. THOMPSON Analysis Date: 03-APR-03 12:00 Instrument: PREP Test: P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A

NELAC:Y

Analyst: D. DRABENSTOTT Analysis Date: 04-APR-03 14:48 Instrument: CVAA Test: M620.4.0
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:45 Instrument: ICP Test: M602.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L

TCLP BERYLLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:45 Instrument: ICP Test: M605.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:45 Instrument: ICP Test: M634.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:45 Instrument: ICP Test: M638.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L

TCLP ZINC ICP SW846-6010B

NELAC

Analyst: J. KRAMER

Analysis Date: 04-APR-03 06:45

Instrument: ICP

Test: M639-B.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was not received on ice at temperature 22.1 C.
Sample chain of custody number 10945.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8304	Received	Project	Lab ID
	31-MAR-03		A624100
	Complete	PO Number	
	07-APR-03	1	
	Printed	Sampled	
	08-APR-03	07-MAR-03	

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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Sample Description
CLIENT ID: SAMPLE # 1184103 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: GUARDIAN Submitter Code :1147

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL		Analysis Date: 02-APR-03 10:00	
		Instrument: PREP	
		Test: P106.1.0	
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	12.2		Std. Units
ADJUSTED PH	12.2		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	11.8		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	24.0		Degrees C
INITIAL TIME	11512.3		Hours
FINAL TIME	11528.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH		Analysis Date: 03-APR-03 16:00	
		Instrument: PREP	
		Test: P130.8.0	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M603.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

TCLP BARIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M604.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
BARIUM	0.062	0.050	mg/L

TCLP CADMIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M608.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

TCLP CHROMIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M610.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
CHROMIUM	2.6	0.050	mg/L

TCLP LEAD ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M616.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
LEAD	0.051	0.050	mg/L

TCLP NICKEL ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M622.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L

TCLP SELENIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 04-APR-03 05:42	Instrument: ICP	Test: M628.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

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Parameter	Result	Det. Limit	Units
SELENIUM	66.	0.10	mg/L

TCLP SILVER ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 05:42 Instrument: ICP Test: M630.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: D. THOMPSON Analysis Date: 03-APR-03 12:00 Instrument: PREP Test: P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A

NELAC:Y

Analyst: D. DRABENSTOTT Analysis Date: 04-APR-03 14:48 Instrument: CVAA Test: M620.4.0
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 05:42 Instrument: ICP Test: M602.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L

TCLP BERYLLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 05:42 Instrument: ICP Test: M605.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 05-APR-03 08:04 Instrument: ICP Test: M634.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 04-APR-03 05:42 Instrument: ICP Test: M638.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A624100 SAMPLE # 1184103

TCLP ZINC ICP SW846-6010B

NELAC

Analyst: J. KRAMER

Analysis Date: 04-APR-03 05:42

Instrument: ICP

Test: M639.8

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was not received on ice at temperature 22.1 C.
Sample chain of custody number 10945.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

Approved :

P.K. Sance OAO

Page 4 (last page)

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8304	Received	Project	Lab ID
	31-MAR-03		A624101
	Complete	PO Number	
	07-APR-03	1	
	Printed	Sampled	
	08-APR-03	08-MAR-03	

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
--	--

CLIENT ID: SAMPLE # 1184104 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: GUARDIAN Submitter Code :1147	Sample Description
--	--------------------

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL		Analysis Date: 02-APR-03 10:00	Instrument: PREP
		Test: P106.1.0	

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	12.1		Std. Units
ADJUSTED PH	12.0		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	10.4		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	24.0		Degrees C
INITIAL TIME	11512.3		Hours
FINAL TIME	11528.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH		Analysis Date: 03-APR-03 16:00	Instrument: PREP
		Test: P130.8.0	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.050	mg/L

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	2.5	0.050	mg/L

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L

TCLP SELENIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M628.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SELENIUM			

Parameter	Result	Det. Limit	Units
SELENIUM	120	0.050	mg/L

TCLP SILVER ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M630:8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: D. THOMPSON Analysis Date: 03-APR-03 12:00 Instrument: PREP Test: P131:9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A

NELAC:Y

Analyst: D. DRABENSTOTT Analysis Date: 04-APR-03 14:48 Instrument: CVAA Test: M620:4.0
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M602:8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L

TCLP BERYLLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M605:8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M634:8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:49 Instrument: ICP Test: M638:8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A624101 SAMPLE # 1184104

TCLP ZINC ICP SW846-6010B

NELAC:

Analyst: J. KRAMER

Analysis Date: 04-APR-03 06:49

Instrument: ICP

Test: M639.8.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was not received on ice at temperature 22.1 C.
Sample chain of custody number 10945.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

Approved :

P.K. Sauer QAS

Page 4 (last page)

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	Received 31-MAR-03	Project PO Number 1	Lab ID A624102
	Complete 07-APR-03	1	
	Printed 08-APR-03	Sampled 06-MAR-03	

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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Sample Description
CLIENT ID: SAMPLE # 1184340 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: GUARDIAN Submitter Code :1147

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL		Analysis Date: 02-APR-03 10:00	
		Instrument: PREP	
		Test: P106.1.0	
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	12.3		Std. Units
ADJUSTED PH	12.1		Std. Units
BUFFER SOLUTION PH	2.93		Std. Units
FINAL PH	12.0		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	24.0		Degrees C
INITIAL TIME	11512.3		Hours
FINAL TIME	11528.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH		Analysis Date: 03-APR-03 16:00	
		Instrument: PREP	
		Test: P130.8.0	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.076	0.050	mg/L

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	3.7	0.050	mg/L

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	0.13	0.050	mg/L

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L

TCLP SELENIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M628.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SELENIUM			

Parameter	Result	Det. Limit	Units
SELENIUM	68.	0.050	mg/L

TCLP SILVER ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M630.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: D. THOMPSON Analysis Date: 03-APR-03 12:00 Instrument: PREP Test: P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A

NELAC:Y

Analyst: D. DRABENSTOTT Analysis Date: 04-APR-03 14:48 Instrument: CVAA Test: M620.4.0
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M602.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ANTIMONY	0.055	0.050	mg/L

TCLP BERYLLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M605.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M634.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 04-APR-03 06:53 Instrument: ICP Test: M638.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L

TCLP ZINC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER

Analysis Date: 04-APR-03 06:53

Instrument: ICP

Test: M639-B.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L

Sample Comments

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample was not received on ice at temperature 22.1 C.
Sample chain of custody number 10945.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

*LDR Treatability Variance Petition
Heritage Environmental Services, LLC
Indianapolis, Indiana
May 7, 2003*

Appendix D
Heritage Stabilization Tests (EPA recipe)

Objectives:

1. Test the EPA stabilization recipe on 5 different samples of the Guardian raw waste.

Waste Materials Tested:

The following 5 samples of Guardian raw waste were used for the stabilization tests:

Batch No.	Sample Date	Lab ID No.	
No. 1183982	3/6/03	H143746	Se = 6.7% (est.)
No. 1183983	3/7/03	H143745	Se = 5.8% (est.)
No. 1184103	3/7/03	H143748	Se = 6.0% (est.)
No. 1184104	3/8/03	H143749	Se = 7.2% (est.)
No. 1184304	3/6/03	H143747	Se = 6.3% (est.)

Protocol:

1. The recipe in the Fed Reg apparently used by CWM for their variance was a 200% dose of portland cement and a 70% dose of FSH. Accordingly, all five stabilization tests were performed using this recipe.
2. Each test was set up the same way. The dry materials were weighed out and blended in a container by hand using a tongue depresser. Water was then added in increments and mixed until a paste was formed. The paste was then transferred to a new plastic cup that was pre-weighed. The wet weight was recorded and then a glass watch glass was placed over the cup during the cure time. The compacted volumes were measured by level comparison with water in a cup.
3. After a cure time of 22 hours, the samples were submitted to the Heritage commercial lab for TCLP analysis. Prearrangements were made with the lab so that the TCLP tests were initiated within a few hours after submittal. The actual cure time was therefore about 24 hours.

	No. 1183982	No. 1183983	No. 1184103	No. 1184104	No. 1184304
<u>Sample Formulations (grams)</u>	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>	<u>Test 4</u>	<u>Test 5</u>
Guardian Raw Sample	40	40	40	40	40
Portland Cement (Type 1)	80	80	80	80	80
Ferrous Sulfate Heptahydrate	28	28	28	28	28
Water (gms)	67	67	67	67	67
Total Weight:	215.0	215.0	215.0	215	215
Grams raw waste in 25 gms mix:	4.7	4.7	4.7	4.7	4.7
Cement to Waste Ratio:	2.0	2.0	2.0	2.0	2.0
FSH to Waste Ratio:	0.7	0.7	0.7	0.7	0.7
 Time mix was prepared on 3/26/03:	3:00 PM	3:25 PM	3:40 PM	3:55 PM	4:10 PM
Empty cup tare wt (gms):	12.05	12.09	11.88	11.77	11.79
Total Weight after mix added:	218.63	214.29	213.62	215.37	211.38
Initial wt. of wet mix placed in cup:	206.58	202.20	201.74	203.60	199.59
Approx. volume (ml):	122	122	122	122	122
Wet Density (gms/ml):	1.69	1.66	1.65	1.67	1.64

The stabilized samples were submitted to the commercial lab at 2:00 pm on Thursday March 27.

See Attached data summary for TCLP results.

LDR Treatability Variance Petition
Heritage Environmental Services, LLC
Indianapolis, Indiana

TABLE 4
Summary of TCLP Results From Stabilization
Guardian Waste Samples Using the EPA Variance Recipe

Guardian Sample No.	1183982	1183983	1184103	1184104	1184340	
Sample Date	3/6/03	3/7/03	3/7/03	3/8/03	3/6/03	
Selenium Content (%)	6.7%	5.8%	6.0%	7.2%	6.3%	
Lab Stabilization Date:	3/26/2003	3/26/2003	3/26/2003	3/26/2003	3/26/2003	LDR
Stab. Recipe (cement : FSH : waste):	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	(2.0 : 0.7 : 1.0)	Criterion
Lab ID Number:	A623858	A623859	A623860	A623861	A623862	(mg/l)
TCLP results (mg/l)	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>	<u>Test 4</u>	<u>Test 5</u>	
Arsenic	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	5.0
Barium	0.38	0.42	0.35	0.36	0.38	21
Cadmium	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	0.11
Chromium	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	0.60
Lead	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	0.75
Nickel	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	bdl (0.025)	11
Selenium	45	28	38	40	38	5.7
Silver	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	0.014
Mercury	bdl (0.0020)	bdl (0.0020)	bdl (0.0020)	bdl (0.0020)	bdl (0.0020)	0.025
Antimony	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	1.15
Beryllium	bdl (0.020)	bdl (0.020)	bdl (0.020)	bdl (0.020)	bdl (0.020)	1.22
Thallium	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.10)	bdl (0.050)	0.20
Vanadium	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	bdl (0.050)	1.6
Zinc	bdl (0.10)	bdl (0.10)	bdl (0.10)	bdl (0.10)	bdl (0.10)	4.3

bdl = below detection limits (at __ mg/l)

TO ENSURE PROPER HANDLING OF PLEASE COMPLETE THIS ENTIRE FORM

HERITAGE ENVIRONMENTAL SERVICES

COMMERCIAL LABORATORY OPERATIONS

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

I - 96508

[illegible]

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	Received 27-MAR-03	Project A623	Lab A623
	Complete 02-APR-03	PO Number 1	
	Printed 02-APR-03	Sampled	

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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CLIENT ID: SE STAB VARIANCE TEST 1 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: TCLP METALS PLUS NICKEL Submitter Code :1147	Sample Description
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TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL	Analysis Date: 27-MAR-03	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	11.3		Std. Units
ADJUSTED PH	10.6		Std. Units
BUFFER SOLUTION PH	2.85		Std. Units
FINAL PH	11.4		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.5		Degrees C
INITIAL TIME	17156.9		Hours
FINAL TIME	17174.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH	Analysis Date: 28-MAR-03 15:30	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:17 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:17 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.38	0.050	mg/L
DILUTION 1:5			

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:17 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L
DILUTION 1:5			

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:17 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:17 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L
DILUTION 1:5			

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:17 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
NICKEL			

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L
DILUTION 1:5			

TCLP SELENIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M628.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SELENIUM	45.	0.050	mg/L
DILUTION 1:5			

TCLP SILVER ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M630.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
DILUTION 1:5			

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A			
Analyst: D. THOMPSON	Analysis Date: 31-MAR-03 15:00	Instrument: PREP	Test: P131.9.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A		NELAC:Y	
Analyst: D. DRABENSTOTT	Analysis Date: 01-APR-03 11:59	Instrument: CVAA	Test: M620.4.0
Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M602.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BERYLLIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M605.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L
DILUTION 1:5			

TCLP THALLIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M634.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP VANADIUM ICP SW846-6010B			NELAC:N
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M638.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP ZINC ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:17	Instrument: ICP	Test: M639.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L
DILUTION 1:5			

Sample Comments

BDL Below Detection Limit
NA Not Applicable
YES Yes

Sample was not received on ice at temperature 21.2 C.
Sample chain of custody number 96508.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

R. K. Pence AP

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C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	Received	Project	Lab ID
	27-MAR-03		A62385
	Complete	PO Number	
	02-APR-03	1	
	Printed	Sampled	
	02-APR-03		

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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Sample Description CLIENT ID: SE STAB VARIANCE TEST 2 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: TCLP METALS PLUS NICKEL Submitter Code :1147

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL	Analysis Date: 27-MAR-03	Instrument: PREP	Test: P106:1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	11.4		Std. Units
ADJUSTED PH	10.7		Std. Units
BUFFER SOLUTION PH	2.85		Std. Units
FINAL PH	11.6		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.5		Degrees C
INITIAL TIME	17156.9		Hours
FINAL TIME	17174.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH	Analysis Date: 28-MAR-03 15:30	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

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Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M603.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BARIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M604.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
BARIUM	0.42	0.050	mg/L
DILUTION 1:5			

TCLP CADMIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M608.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L
DILUTION 1:5			

TCLP CHROMIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M610.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP LEAD ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M616.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L
DILUTION 1:5			

TCLP NICKEL ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M622.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L
DILUTION 1:5			

TCLP SELENIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M628.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SELENIUM	28.	0.050	mg/L
DILUTION 1:5			

TCLP SILVER ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M630.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
DILUTION 1:5			

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A		Test: P131.9.0	
Analyst: D. THOMPSON	Analysis Date: 31-MAR-03 15:00	Instrument: PREP	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A		NELAC:Y	
Analyst: D. DRABENSTOTT	Analysis Date: 01-APR-03 11:59	Instrument: CVAA	Test: M620.4.0
Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M602.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BERYLLIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M605.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L
DILUTION 1:5			

TCLP THALLIUM ICP SW846-6010B				NELAC:Y
Analyst: J. KRAMER		Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M634.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0				
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0				
Parameter	Result	Det. Limit	Units	
THALLIUM	BDL	0.050	mg/L	
DILUTION 1:5				

TCLP VANADIUM ICP SW846-6010B				NELAC:N
Analyst: J. KRAMER		Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M638.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0				
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0				
Parameter	Result	Det. Limit	Units	
VANADIUM	BDL	0.050	mg/L	
DILUTION 1:5				

TCLP ZINC ICP SW846-6010B				NELAC:Y
Analyst: J. KRAMER		Analysis Date: 29-MAR-03 11:21	Instrument: ICP	Test: M639.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0				
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0				
Parameter	Result	Det. Limit	Units	
ZINC	BDL	0.10	mg/L	
DILUTION 1:5				

Sample Comments

BDL Below Detection Limit
NA Not Applicable
YES Yes

Sample was not received on ice at temperature 21.2 C.
Sample chain of custody number 96508.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.
The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.
Arizona License Number AZ0627.

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	Received	Project	Lab
	27-MAR-03		A623860
	Complete	PO Number	
	02-APR-03	1	
	Printed	Sampled	
	02-APR-03		

Report To	Bill To
RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231

Sample Description
CLIENT ID: SE STAB VARIANCE TEST 3 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: TCLP METALS PLUS NICKEL Submitter Code :1147

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL	Analysis Date: 27-MAR-03	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	11.4		Std. Units
ADJUSTED PH	10.9		Std. Units
BUFFER SOLUTION PH	2.85		Std. Units
FINAL PH	11.5		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.5		Degrees C
INITIAL TIME	17156.9		Hours
FINAL TIME	17174.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH	Analysis Date: 28-MAR-03 15:30	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.35	0.050	mg/L
DILUTION 1:5			

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L
DILUTION 1:5			

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L
DILUTION 1:5			

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L
DILUTION 1:5			

TCLP SELENIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:25	Instrument: ICP	Test: M628.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SELENIUM	38.	0.050	mg/L
DILUTION 1:5			

TCLP SILVER ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:25	Instrument: ICP	Test: M630.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
DILUTION 1:5			

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A			
Analyst: D. THOMPSON	Analysis Date: 31-MAR-03 15:00	Instrument: PREP	Test: P131.9.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A		NELAC:Y	
Analyst: D. DRABENSTOTT	Analysis Date: 01-APR-03 11:59	Instrument: CVAA	Test: M620.4.0
Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:25	Instrument: ICP	Test: M602.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BERYLLIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:25	Instrument: ICP	Test: M605.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L
DILUTION 1:5			

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M634.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M638.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP ZINC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:25 Instrument: ICP Test: M639.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L
DILUTION 1:5			

Sample Comments

BDL Below Detection Limit
NA Not Applicable
YES Yes

Sample was not received on ice at temperature 21.2 C.
Sample chain of custody number 96508.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8304	Received 27-MAR-03	Project 	Lab A623001
	Complete 02-APR-03	PO Number 1	
	Printed 02-APR-03	Sampled 	

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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CLIENT ID: SE STAB VARIANCE TEST 4 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: TCLP METALS PLUS NICKEL Submitter Code :1147	Sample Description
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TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL	Analysis Date: 27-MAR-03	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	11.3		Std. Units
ADJUSTED PH	10.7		Std. Units
BUFFER SOLUTION PH	2.85		Std. Units
FINAL PH	11.6		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.5		Degrees C
INITIAL TIME	17156.9		Hours
FINAL TIME	17174.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH	Analysis Date: 28-MAR-03 15:30	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L

DILUTION 1:5

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.36	0.050	mg/L

DILUTION 1:5

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L

DILUTION 1:5

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L

DILUTION 1:5

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

DILUTION 1:5

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
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Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L
DILUTION 1:5			

TCLP SELENIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 10:37	Instrument: ICP	Test: M628.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SELENIUM	40.	0.050	mg/L
DILUTION 1:5			

TCLP SILVER ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 10:37	Instrument: ICP	Test: M630.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
DILUTION 1:5			

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A			
Analyst: D. THOMPSON	Analysis Date: 31-MAR-03 15:00	Instrument: PREP	Test: P131.9.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A			NELAC:Y
Analyst: D. DRABENSTOTT	Analysis Date: 01-APR-03 11:59	Instrument: CVAA	Test: M620.4.0
Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 10:37	Instrument: ICP	Test: M602.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BERYLLIUM ICP SW846-6010B			NELAC:Y
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 10:37	Instrument: ICP	Test: M605.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L
DILUTION 1:5			

TCLP THALLIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M634.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.10	mg/L
DILUTION 1:5			

TCLP VANADIUM ICP SW846-6010B

NELAC:N

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M638.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP ZINC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 10:37 Instrument: ICP Test: M639.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L
DILUTION 1:5			

Sample Comments

BDL Below Detection Limit
NA Not Applicable
YES Yes

Sample was not received on ice at temperature 21.2 C.
Sample chain of custody number 96508.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

The sample results relate only to the analytes of interest tested
or to the sample as received by the lab.

Heritage Environmental Services, LLC certifies that the test results
indicated as NELAC (National Environmental Laboratory Accreditation
Conference) accredited (Yes for NELAC) meet all requirements of NELAC and
Illinois EPA Part 186 unless otherwise explained or justified as to the
the exact nature of the deviations.

Heritage Environmental Services, LLC is accredited under Illinois NELAC
accreditation number 100401.

Arizona License Number AZ0627.

Approved : P. C. Seavey

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C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317) 243-8304	Received	27-MAR-03	Project	Lab #
	Complete	02-APR-03	PO Number	
	Printed	02-APR-03	1	
	Sampled			

Report To RALPH ROPER HERITAGE TECHNOLOGY GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231	Bill To HERB WISSEL HERITAGE RESEARCH GROUP 7901 WEST MORRIS STREET INDIANAPOLIS, IN 46231
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Sample Description
CLIENT ID: SE STAB VARIANCE TEST 5 MATRIX TYPE: SLUDGE, SOIL, SOLID OR SEDIMENT DESCRIPTION: TCLP METALS PLUS NICKEL Submitter Code :1147

TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: M. HALL		Analysis Date: 27-MAR-03	
Instrument: PREP		Test: P106.1.0	

Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
EXTRACTED SAMPLE	100.0		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	11.5		Std. Units
ADJUSTED PH	10.6		Std. Units
BUFFER SOLUTION PH	2.85		Std. Units
FINAL PH	11.5		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	NA		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.5		Degrees C
INITIAL TIME	17156.9		Hours
FINAL TIME	17174.3		Hours
PHASE 0 VOLUME (REP 0)	2000		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: L. SMITH		Analysis Date: 28-MAR-03 15:30	
Instrument: PREP		Test: P130.8.0	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

TCLP ARSENIC ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP Test: M603.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BARIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP Test: M604.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.38	0.050	mg/L
DILUTION 1:5			

TCLP CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP Test: M608.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L
DILUTION 1:5			

TCLP CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP Test: M610.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP Test: M616.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L
DILUTION 1:5			

TCLP NICKEL ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP Test: M622.8.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

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Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.025	mg/L
DILUTION 1:5			

TCLP SELENIUM ICP SW846-6010B Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP NELAC:Y Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0 Test: M628.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SELENIUM	38.	0.050	mg/L
DILUTION 1:5			

TCLP SILVER ICP SW846-6010B Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP NELAC:Y Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0 Test: M628.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
DILUTION 1:5			

MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A Analyst: D. THOMPSON Analysis Date: 31-MAR-03 15:00 Instrument: PREP Test: P131.9.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	4.0		mL
FINAL VOLUME	40		mL

TCLP MERCURY CVAA SW846-7470A Analyst: D. DRABENSTOTT Analysis Date: 01-APR-03 11:59 Instrument: CVAA NELAC:Y Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0 Test: M620.4.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0020	mg/L

TCLP ANTIMONY ICP SW846-6010B Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP NELAC:Y Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0 Test: M602.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.050	mg/L
DILUTION 1:5			

TCLP BERYLLIUM ICP SW846-6010B Analyst: J. KRAMER Analysis Date: 29-MAR-03 11:28 Instrument: ICP NELAC:Y Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0 Test: M605.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.050	mg/L
DILUTION 1:5			

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.020	mg/L
DILUTION 1:5			

TCLP THALLIUM ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:28	Instrument: ICP	Test: M634.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP VANADIUM ICP SW846-6010B		NELAC:N	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:28	Instrument: ICP	Test: M638.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.050	mg/L
DILUTION 1:5			

TCLP ZINC ICP SW846-6010B		NELAC:Y	
Analyst: J. KRAMER	Analysis Date: 29-MAR-03 11:28	Instrument: ICP	Test: M639.8.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0			
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
ZINC	BDL	0.10	mg/L
DILUTION 1:5			

Sample Comments	
BDL	Below Detection Limit
NA	Not Applicable
YES	Yes
Sample was not received on ice at temperature 21.2 C. Sample chain of custody number 96508.	
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